TRANSITIONAL LABOR: UNDOCUMENTED WORKERS IN A CHANGING AUTOMOBILE INDUSTRY

by

Rebecca Hope Morales

B.Arch. University of California, Berkeley
(1969)

M.A. University of California, Los Angeles
(1972)

Submitted to the Department of
Urban Studies and Planning
in Partial Fulfillment of the
Requirements of the
Degree of

DOCTOR OF PHILOSOPHY

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

February 1984

Signature of Author: _____
Department of Urban Studies and Planning
February, 1984

Certified by _____
Thesis Supervisor

Accepted by _____
Head Ph.D. Committee

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ABSTRACT

This study examines the employment of undocumented workers by Los Angeles manufacturers of automobile parts. It suggests that this is part of a broad trend towards primary labor market erosion. The laborforce is termed transitional because it is seen as facilitating firms during the current period of industrial change. Insight into the role of these workers is derived from eight case studies representing 926 workers. Regressions on the determinants of wages and the percent undocumented in the workplace are developed from 21 firms and 2321 workers.

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Thesis Supervisor

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Rebecca Morales
University of California, Los Angeles
Graduate School of Architecture and Urban Planning
Los Angeles, California 90024

November 1983

This research was supported by grants from the Harvard-MIT Joint Center for Urban Studies, the International Labor Organization, Labor Research Fellowship, and the Chicano Studies Research Center, Institute of American Cultures, University of California at Los Angeles.

CHAPTER 1

TRANSTIONAL LABOR IN A PERIOD OF ECONOMIC TRANSFORMATION

Introduction

As the global economy takes on what some are calling "a new international order," economic, social, and spatial forms of societal organization at the national level are also undergoing major redefinition. For example, internationalization has led to interdependencies among developing and industrialized countries that is redefining the basis for national sovereignty. Viewed another way, the hypermobility of capital and labor across international boundaries has so destabilized social constructions that states and localities have become weak partners to private sector corporations, and in the process has forced working class people to suffer material setbacks in the name of technological and economic progress. Integral to the emergence of the new international order in the U.S. has also been a strategic role played by "illegal," or undocumented workers. Segments of labor that had previously been marginal, such as the undocumented, became linch-pins in the economic transformation, which in retrospect spanned from the mid-sixties to the early 1980's. This study is an examination of how undocumented workers factored into the process of economic destabilization and reconstruction during this period.

Historically, undocumented workers and immigrants have come to national attention whenever there has been an economic crisis accompanied by high unemployment. However, the current situation takes on a different light because of the pivotal role played by undocumented workers toward the ushering in a new era, which, by some accounts, constitutes a "second industrial revolution." As a

consequence, the theoretical bases for understanding the process of "development" as it pertains to industrialized nations are correspondingly being revised in order to come to terms with the appropriate significance of undocumented workers. The purpose here is to explore that territory--to look at how undocumented workers surfaced in the U.S. economy, and to examine what this means with respect to the concept of "development." Along these lines, the following discussion will focus first on recently emerging critical functions of undocumented workers based on observations in Los Angeles, and secondly on the theoretical implications of these trends on the development literature.

Undocumented Workers in the Los Angeles Economy

Undocumented workers have the unenviable distinction of personifying leakages and imperfections in a society. Their presence is a reminder of the frailty of borders, while their employment acts as a bellweather to the poor health of an industrial base. Periods of profound reconstruction further heighten public sensitivity to the existence of this population. Yet, in spite of the interest they generate, there are many aspects of their utility in the laborforce that remain partially understood. This study is one effort to bring added clarity to the picture.

Within the U.S., the undocumented workforce is expanding, and has been since the mid-sixties. This period marked the closure of the Bracero Program (1964), a contract labor program based on a bilaterial agreement with Mexico for the temporary employment of workers in U.S. agriculture. In anticipation that Mexican communities would have difficulty re-incorporating thousands of newly jobless persons, Mexico established a Border Industrialization Program (BIP) in 1965 modelled after other export processing zones (EPZ). Previous to the BIP, there were only two EPZ's, or industrial zones characterized by various tariff and tax exemptions in the world. The purpose of the BIP was to create jobs for the

displaced masses by attracting U.S. and other firms into the protected zones. Firms could only engage in intermediate steps of production within the BIP, but the advantage was that they were taxed solely for the value added by low-cost labor which was paid at a fraction of the U.S. equivalent. The first firms attracted to the BIP were primarily garment and electronics that began employing women, not the men who had been Braceros. With no prospect for jobs, hundreds of thousands of Mexicans began making their way across the border, often without the benefit of legal documents (hence, undocumented).

This growing source of labor coincided with a rising demand for low wage labor in the U.S. as illustrated in the case of Los Angeles. During the mid-sixties, the economic prosperity generated by post-war growth began to seem illusory. The first indicator was the Watts riots of 1965 which brought attention to the fact that unemployment was a deeply rooted problem. Subsequent Chicano demonstrations added to the civil unrest.[1] A relative economic stagnation then hit Los Angeles County resulting in enormous welfare expenditures.[2] The shakey foundation of the economy was further jarred by cessation of the Viet Nam war build-up which came to an abrupt recessionary end in 1969. The recession of 1969-70 also marked the end of a decade of prominance by manufacturing in Los Angeles. The Los Angeles County workforce employed in manufacturing had peaked at 35% and began a sharp decline, while employment in services, wholesale and retail trade, finance, and government grew.[3] By the end of the 1973-75 global recession, and the recession of 1979-80, it was apparent that a significant industrial restructuring had begun.

During this long period of economic contraction, many manufacturing firms in the U.S., particularly those in the declining sectors, were pressed to find options for remaining viable. If their method of production consisted of discrete steps that required minimal skill and were labor intensive, and if they had the financial

capacity, these firms could move part of their production to the BIP or other EPZs. This was an early trend among many highly competitive manufacturers in electronics and the garment industry. What it did to their competitors remaining in the U.S. was force them to meet the lower costs of production. As this occurred, the employment of immigrant, and especially undocumented, labor became particularly important.

Since then, the firms locating production units in the Mexican industrial zone have come from a broad range of manufacture. Of the over 200 firms cited in a 1976 Congressional hearing as having factories in the Mexican border towns of Tijuana, Tecate, and Ensenada, approximately 50% were headquartered in Los Angeles.[4] They included corporations like Hughes Aircraft, Northrup, and Rockwell, as well as numerous small firms involved in apparel, food processing, furniture, auto parts, and electronics.[5] With each firm that moved to the border or other international sites, a circuit was strengthened that affected L.A. workers and producers alike. This circuit consisted of the export of production to Mexico and the importation of labor, ties that became stronger with each recessionary set-back. Because of this symbiotic relationship, it is now possible to think of the border as the outer boundaries of the Los Angeles regional labor market.

Within Los Angeles, the undocumented workers became identified with nearly all sectors of the regional economy. In the last decade, they were particularly important among three categories of employers. The first, and most traditional, were the classically immigrant industries, such as garment that retained a highly competitive structure, were frequently small, and paid low wages. These industries had developed a system of sub-contracting that allowed sweatshops (firms operating below minimum wage and labor standards definitions) and homework (industrial work performed at home) to proliferate. The concept that urban undocumented workers

were an excessively exploited laborforce emerged out of the recognition that entire sectors had become not only immigrant dependent, but organized around substandard methods of production.

The second group of employers consisted of basic manufacturing firms faced with the necessity of rapidly adjusting to the repeated recessions, a situation made worse by the international competition that had seriously penetrated the U.S. market. These employers were extremely problematic since they signalled the extent to which market uncertainties were triggering radical solutions. Initially, this situation was seen as anomoly isolated to a few firms which had simply taken advantage of the available labor, a problem generated by conditions of labor supply. A closer examination proved otherwise. As the findings of this research indicate, the occurrance was instead structural, and rooted in the process of economic transformation. The employers used undocumented workers as a controllable laborforce that could be easily released as a temporary strategy for maintaining production until longer term market solutions could be established, such as moving to Mexico or elsewhere, changing product lines, or automating. For this reason, they have been termed transitional labor, since they aided in the economic transformation of troubled manufacturing firms.

The final set of employers consisted of the growing service and high-tech sectors known for having a dual employment structure: a few well-paid, highly skilled positions on the one hand; and a large base of unstable, low-wage jobs on the other. U.S. workers, freshly out of work from good paying manufacturing jobs with commitments that tied them to higher wages and benefits, found that the emerging employment base was a step backward into a downwardly mobile lifestyle. Instead, the immigrant laborforce became absorbed into and linked with the poorly paid jobs in the growth sectors. This in turn alerted the U.S. to both the nature of the

emerging labor demand, and the critical factors (such as a poorly paid, unstable workforce) necessary to the recovery and place of international dominance by major urban centers.

The concept of an "advanced" economy where growth is linked to high technology employment implies an association with progress. In fact, the prominence of immigrant labor, and in particular undocumented labor, tells us something about the nature of"progress," or economic development in industrialized nations. What is suggested is that the transformation of the U.S. economy has not been smooth, nor simple, nor uniformly beneficial. Rather than advancing all segments of society equally, the effects have been felt selectively. Here, the economic development literature has been insightful with respect to the uneveness created by the internationalization of capital. More recently, we are coming to understand the full impact of the coincident internationalization of labor on "development." A brief review of a few points illustrate this.

Reflections on Economic Development

Early generations of political economists were concerned with the systemic disequilibrium of the global economy that followed the expansion of capitalism. For example, the literature on imperialism focused on the relationship between underconsumption and the inherent drive by capitalism into economies wielding less market power. This led J.A. Hobson to postulate that incomes would always be unequally distributed under capitalism.[6] His argument was that a shortage of purchasing power among the poor, coupled with a saturation of demand resulting in forced savings by the rich, would create excessive production relative to consumption that would be exaccerbated over time. Thus, the imperialistic drive into colonies and semicolonies initiating the process of unequal development was

motivated by a dual need for new outlets in which capitalists could invest their ever-increasing savings, and by a search for markets in which they could sell their surplus products.

V.I. Lenin advanced this position with the observation that imperialism actually was characterized by monopoly capitalism, or that stage of capitalism distinguished by the concentration of ownership.[7] The emerging conglomerates were exerting oligoplolistic control over local product markets, while simultaneously forcing an increased worldwide competition in the search for areas to invest their surplus capital. Since foreign investment led to lower costs of production, it enabled entrepreneurs to lower prices while maintaining profits. In addition, the process of accumulation and expansion created a surplus laborforce in the industrialized countries due to the loss of jobs to workers in the periphery. As Rosa Luxemberg later noted, capital could simultaneously extract surplus value from urban workers in industrialized countries who were constrained in their demands by a local pool of redundant labor, while on a similar basis maintain leverage over workers in predominantly pre-capitalist economies.[8]

Development in the peripheral countries often involved the amassing of agricultural land required for large-scale farming, thereby releasing large numbers of people, coupled with restructured urban employment absorbing deskilled workers to the point of saturation. The residual to this pattern of growth were mobile mass workers who were drawn by the potential of employment into advanced nations. In retrospect, the expansion of capitalism not only generated internationally mobile workers, it also encouraged class distinctions among workers based on the immigrant status in the advanced countries. This was exemplified in Lenin's comment that, "in the U.S., immigrants from Eastern and Southern Europe are engaged in the most poorly paid occupations, while American workers provide the highest percentage of

overseers or of the better paid workers. Imperialism has the tendency to create privileged sections even among the workers, and to detach them from the main proletarian mass."[9]

A fractionalization of the working class with respect to immigrant status (as well as race and sex) was developing in the U.S. that was further shaped by national policies. As Paul Baran, Paul Sweezy, and Harry Braverman, among others noted monopoly capitalism led to broad changes in the structure of state power which were required to maintain the economic system.[10] These state policies included tariff and tax measures that rewarded mobility by capital to international sites. Subsequently, as more economically advanced societies entered a period distinguished by an increased use of automation, it became apparent that de-skilled production workers could be replaced abroad by foreign workers and at home by automation through a process facilitated by the state.[11]

From one perspective the world economic system was becoming increasingly integrated, but from another, the emerging global order was instead becoming increasingly delineated, as illustrated in the concept of a world economic system developed by Immanuel Wallerstein. Under this formulation, once the economic system was set in motion, it was retained due to class interests. It is Wallerstein's contention that:

> The division of the world-economy involves a hierarchy of occupational tasks, in which tasks requiring higher levels of skill and greater capitalization are reserved for higher-ranking areas. Since a capitalist world-economy essentially rewards accumulated capital at a higher rate than "raw" labor power, the geographical maldistribution of these occupational skills involves a strong trend toward self-maintenance. The forces of the marketplace reinforce them rather than undermine them. And the absence of a central political mechanism for the world-economy makes it very difficult to intrude counteracting forces to the maldistribution of rewards.[12]

According to this conception, the world can be thought of as abstractly divided into core, periphery, and semi-peripheral zones, each characterized by different

productive processes, occupational categories, and means of controlling labor. An inherent imbalance in the global economy is postulated to exist because surplus labor was continually generated at the periphery and absorbed at no cost of reproduction by the industrialized countries. This imbalance was seen as perpetuated by social rewards accrued to dominant class interests and supported by the state in both the core and the periphery. In the tradition of dependency theorists and advocates of irreversible structural uneveness, it was argued that wealth was parasitically transferred from the periphery to the core.[13]

At the root of uneven development is capital accumulation and the search for ways that capital can extract ever-increasing value from labor, such as through capital mobility. In the process, this creates unequal returns among capitals, and an "unequal exchange" in the transfer of value across economic spaces.[14] However, there is nothing fixed about the relationships that develop among capital, between capital and labor, and across space, since the ease with which capital can extract value must be conditioned by mass struggles in regions of underdeveloped social formations, and by proletarian struggles in areas of developed social formations. That is, labor can define critical constraints within which capital makes its choices, and the spatial consequences can be a blurring of the distinction between core and periphery. For example, within the U.S., the struggle between capital and labor during the period of economic transformation was marked by capital flight on the one hand, and the employment of immigrant and undocumented labor on the other. Eventually, however, even the transitional undocumented workers were also too demanding. As the research will indicate, their continual opposition with employers through union disputes, rising demands, and workplace conflicts made them a temporary solution. Thus, the actions taken by capital to circumvent these workers led to a further integration of the global economy (in contrast to the divisions

suggested by Wallerstein). The active participation by labor in shaping capitalist economies also illustrates a far more dynamic role by immigrant labor than had been understood by Lenin when he made his first observations.

From the position that labor places limitations on capital, the previously described categories for understanding immigrant workers take on added dimensions. Workers associated with either marginalized, declining, or growth sectors could be understood as encountering distinct class conflicts, and different struggles with capital. Numerous studies analyzing the role of immigrants as marginalized workers, and more recently, as contributors to growth have touched on this. The research presented here focuses on the demand for undocumented workers within declining sectors during the conjuncture of capitalist periods. Yet, in all three roles, immigrants (and undocumented workers) actively shape the development of industrialized economies. It is from this perspective the following study of undocumented workers as transitional labor is presented.

Overview of the Research

The focus of the study is how firms caught in the economic transformation used undocumented workers. As such, it is an analysis of the labor process, or the way in which production is organized as a strategy by capital to control labor. This research combines methods of inquiry from several disciplines to arrive at the conclusions. On one hand, the study draws from theories on the absorption of immigrant labor. On the other hand, it develops an analysis of the automobile industry in the process of industrial change. Jointly, these set the context for in-depth plant studies, followed by an aggregate statistical analysis on the employment of undocumented workers.

The Los Angeles automobile industry became the object of analysis for several reasons. First was because of the large undocumented workforce in the region.

Secondly, auto is one of the most highly linked manufacturing industries in the U.S., and historically has been one of the most prominent in setting industrial trends in the labor process. Thus, trends in the Los Angeles automobile industry would directly or indirectly affect many other industries.

The auto industry case studies concentrate on manufacturers of wheels, headers (exhaust manifolds), and batteries since these product lines illustrated different options available to firms as they encountered extreme market pressures. Each firm is analyzed acording to the state of their technology, character of the product market, and structure of the industry in order to understand the basis for their demand for labor. Thus, the case studies provided the background for undertaking an aggregated statistical analysis.

The text is structured in the following format. Chapter 2 presents a model for looking at the roles of immigrant labor using Marxist categories of surplus labor. Here, it is suggested that transitional workers perform a latent reserve function in the economy. Chapter 3 focuses on industrial restructuring in the U.S. (the causes and outcomes), with special attention to the automobile industry. The emphasis is on distinguishing between the way in which parts producers and the auto makers responded during the economic downturn. This distinction later characterized their performance towards the economic recovery. Chapter 4 is a study of eight Los Angeles parts producers in wheels, headers, and batteries that demonstrated different short-term and long-run solutions during the period of change. Primary attention is given to their usage of undocumented workers. Chapter 5 is a statistical analysis based on 21 Los Angeles manufacturing firms. The purpose was to isolate the most significant characteristics of employers of undocumented workers, and to further show which firm and worker attributes are most highly correlated with wage levels. Chapter 6 is an analysis of national policy discussed in

light of the findings. The policies considered involve pertinent immigration, urban, and industrial legislation. Lastly, the appendices discuss the methodology used in undertaking the research, and present descriptive statistics of the firms studied.

In sum, the research proposes not only a new category of undocumented workers, but an alternative way of seeing immigrant labor. The view presented within the emerging global economy, "more-developed" nations are encountering a greater dependence on "internationalized" labor. These marginalized workers are, in fact, integral to the emerging international order.

Chapter 1 Notes

1. The largest was the Chicano Moratorium anti-war demonstration in August, 1970 which involved 30,000 people and is thought to have been the largest Latino political demonstration in recent U.S. history.

2. As reported in the Fact Sheets published by the Los Angeles County Department of Public Social Services, from 1964 to 1969, total welfare payments rose from $20.3 to $43.7 million, while AFDC payments grew from $7.4 to $22.2 million.

3. See Edward Soja, Rebecca Morales, and Goetz Wolff, "Urban Restructuring: An Analysis of Social and Spatial Change in Los Angeles," Economic Geography, Vol. 59, No. 2, April, 1983.

4. U.S. Congress, House Committee on Ways and Means, Subcommittee on Trade, Special Duty Treatment or Repeal of Articles Assembled or Fabricated Abroad, Hearings, 94th Congress, 2nd Session, March 24 and 25, 1976, p.126-133.

5. As reported in Edward Soja, Rebecca Morales, and Goetz Wolff, op.cit., p.222.

6. J.A. Hobson, Imperialism: A Study, written in London, 1902, printed in Ann Arbor: University of Michigan Press, 1971.

7. V.I. Lenin, Imperialism, The Highest Stage of Capitalism, New York: International Publishers, 1939.

8. Rosa Luxemburg, The Accumulation of Capital--An Anti-Critique, New York: Monthy Review Press, 1972.

9. V.I. Lenin, op.cit., p.106.

10. See for example, Paul A. Baran and Paul M. Sweezy, Monopoly Capitalism: An Essay on the American Economic and Social Order, Monthly Review Press, 1966; or Harry Braverman, Labor and Monopoly Capitalism: The Degradation of Work in the Twentieth Century, New York, Basic Books, 1979. Braverman identifies the role of the state under monopoly capitalism as taking on four characteristics: (1) government spending expands and contracts to absorb the economic surplus generated by monopoly capitalism; (2) national policies protect international interests through permanent war mobilization; (3) welfare measures are manipulated to placate the poor and undermine potential revolutionary movements; and (4) services, such as education, that meet the infrastructural needs of industry are provided at public expense.

11. Ernest Mandel in Late Capitalism, London: Verso, 1978, termed the period "late capitalism."

12. Immanuel Wallerstein, The Modern World-System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century, New York: Academic Press, 1974, p.350.

13. For examples of dependency theories see Raul Prebish, The Economic Development of Latin America in the Post-War Period, New York, United Nations, 1964; Celso Furtado, Development and Underdevleopment: A Structural View, Berkeley, University of California Press, 1971; or Fernando H. Cardoso and Enzo Falleto, Dependency and Development in Latin America, Berkeley: University of California Press, 1979.

14. Arghiri Emmanuel, Unequal Exchange: A Study of the Imperialism of Trade, New York: Monthly Review Press, 1972.

CHAPTER 2

THEORIES OF IMMIGRATION AND THE ABSORPTION OF UNDOCUMENTED WORKERS INTO THE U.S. LABORFORCE: OBSERVATIONS BASED ON THE LOS ANGELES EXPERIENCE

Introduction

A paradox has emerged in the Los Angeles labor market. Undocumented workers in violation of immigration laws once commonly ascribed to menial tasks in agriculture, services, or light manufacturing, have entered into new areas of employment. During the recent period of economic decline and high unemployment in the U.S., they became prominent among basic manufacturing sectors in Los Angeles. Although these workers had never previously been linked to auto and other basic industries, the economic climate shaping labor market conditions substantially changed the demand for undocumented workers.

Viewed historically, the seemingly contradictory trends in the Los Angeles economy can be traced to a legacy of interdependence between immigration and economic growth. For example, economist Brinley Thomas has shown that expansionary periods of the industrial revolution were both the outcome and cause of rapid growth among low cost immigrant labor.[1] The current situation reveals that immigrants, particularly temporary workers such as the undocumented, can be equally important during the structural transformation that accompanies economic downturns.

The contemporary U.S. experience has a parallel in post-war Europe. During the Second World War reconstruction, labor shortages heightened the demand for production workers in highly industrialized countries. From the 1950's to the

1970's, guestworker programs were established among European Economic Community and Common Nordic Labour Market nations.[2] They drew from different sources (such as the citizenry of former colonies, or neighboring low-income countries), and allocated the workers into various sectors; construction, mining, services, and manufacturing. Illustrative of the significance of the laborforce, in 1973, foreign workers constituted 10-12% of the working population in Germany and France, and 30% in Switzerland;[3] and from a sectoral perspective, 46% of the semi-skilled assembly workers in the Paris automobile industry were immigrants.[4] Following the OPEC oil crisis of 1973, the number of work permits issued dropped sharply, and flows began to stabilize at a much lower level.[5] But previous to this restrictive period, rising unemployment due to cyclical contractions and structural job loss was accompanied by increasing immigration (guestworker and clandestine) leading Manuel Castells to conclude that immigrant workers were linked to the structural "discrepancies and disequilibria resulting from uneven development...explained primarily by the internal dynamic of advanced capitalist societies."[6]

As in the European case, the present absorption of immigrant workers in Los Angeles has coincided with high unemployment and a prolonged recession. However, the difference is that the temporary workforce of the Los Angeles are undocumented, not guestworkers. Furthermore, the present stage of industrial transformation has expanded the demand for immigrant labor beyond the "arduous and badly paid jobs" observed by Castells. Given a redefined role for immigrant labor, the focus of this analysis is not on backwater sectors or marginal workers in peripherialized industries, but on a temporary workforce integral to the transformation of primary labor markets due to changing economic conditions. Thus, this section will address questions originally posed by Castells: "why capital

is ready to provide jobs for migrants in the advanced countries...even in conditions of unemployment"...and "why the dominant classes introduce a social and political element (immigrant labour) whose presence contradicts their ideology and necessitates more complex mechanisms of social controls,"[7] in light of an particularly relevant current issue, the implications of the spatial organization of industrial restructuring on the demand for immigrant labor.

Historical Roles of Immigrant Labor

Perhaps the best way to situate the function of this new immigrant group is in terms developed by Karl Marx. When Marx analyzed the role of labor in the perpetuation of the capitalist system, he noted that part of the laborforce is actively employed, and part constitutes a surplus population, a reserve army of labor, that is variously employed and unemployed. This surplus labor keeps wages in check by acting as an available supply for capital. It also serves as disposable labor during cyclical or structural periods of unemployment. The categories he gave to workers making up the reserve laborforce were floating, latent, and stagnant.[8] Unemployment created by the substitution of capital for labor (corresponding with greater productivity and periods of expansion), or due to cyclical adjustments results in release of the floating reserve. In the contemporary setting, these workers often have unemployment benefits, severance pay, retraining assistance, or welfare to carry them over till they are re-employed, and are comprised of the most secure of the surplus population, such as white males, or unionized workers in basic manufacturing.

The second category, termed latent, results from shifts that occur in productive activity, such as from agriculture to manufacturing, or within manufacturing, from the declining basic sectors to the emerging high technology. Here, job loss is accompanied by an erosion of wages. Depending on the sector

generating the release of labor and other factors, institutional support of the workers during the period of unemployment may or may not be available. Workers commonly allocated to the latent reserve include white males, though in the current industrial context it increasingly refers to women, minorities, and immigrants.

The stagnant reseve is associated with the secondary labor market using the conventions of segmentation theory. The concept is that part of the laborforce receives "good" wages, can expect relatively stable employment, and are employed in positions that offer occupational mobility and advancement. This is the primary labor market. Another group, characterized by poor wages, high turnover, and dead-end positions, comprises the secondary labor market.[9] Marx was essentially describing secondary labor-market workers when he defined the stagnant reserve as "...part of the active labour army, but with extremely irregular employment...its conditions of life sink below the average normal level of the working class...it forms at the same time a self-reproducing and self perpetuating element of the working class..."[10] The workforce may be attached to peripheralized jobs (subemployment), cottage industries, or sweatshops, but here, the cost of unemployment is more frequently borne by the individual or family than in the other reserve categories. The groups generally identified with the stagnant reserve are women, minorities and immigrants, the most economically disenfranchised populations.[11]

Immigrants have held contradictory class positions throughout the U.S. industrial history--at times entering into active employment; at other times becoming reserve labor; and occasionally acting as the fulcrum for other workers being relegated to various forms of reserve labor. This analysis will explore the different roles of immigrants in light of comparative models using Marx's

categories of labor. However, in order to situate this position theoretically, the discussion will first examine a more conventional view for analyzing the absorption of immigrant labor.

Alejandro Portes once classified immigrants with respect to their mode of incorporation into the economy as secondary and primary labor market workers, and those entering into immigrant enclaves. On the basis of this distinction, he noted that the effects of secondary labor market workers on society are:

1. ...to exercise a downward pressure on working-class wages and on the security and job conditions of domestic workers...
2. ...to upgrade the health and work fitness of the laborforce...
3. Dominant classes in receiving regions collectively save the cost of reproducing a sector of its laborforce...
4. Labor migration tends to fragment the solidarity of the working class as native workers blame a deteriorating economic condition on the migrants. Racists ideologies and discrimination obscure common economic interests and prevent the emergence of a unified working class front. Employers deliberately encourage this division through practices such as ethnic preferences in work assignments.[12]

Here, he also mentions that immigration into the secondary labor market often coincides with high unemployment.

Proceeding with the other categories:

Primary labor market immigrants generally possess the following characteristics:

1. It tends to occur through legal channels...
2. Workers are primarily hired according to ability rather than ethnicity. Employers seldom attempt to promote ethnic opposition among these workers.
3. Immigrants tend to have mobility chances comparable to those of native workers...
4. The function of primary sector immigration is usually to supplement the domestic labor force, rather than to discipline it...[13]

As a mode of incorporation into the receiving economy, immigrant enclaves also posssess several distinct characteristics:

1. Their formation is not a product of deliberate economic politices by the state or the labor needs of the capitalist class, but depends on the initiative and resources of the immigrants themselves...
2. Enclaves are occupationally heterogeous...

3. Ethnicity represents an important aspect of economic exchange within enclaves...
4. Significant opportunities for economic advancement exist in the enclave...
5. Functions which enclaves play for the larger economy are ambiguous...Enclaves can serve as markets, as producers of goods and services for the larger economy, and as sources of low wage labor. Their central characteristic, however, is that all three functions tend to be controlled by a "middleman" immigrant entrepreneurial class.[14]

He further states that: "A necessary condition for the emergence of enclaves is the presence of immigrants with sufficient capital," [15] thus suggesting distinct class differences among these immigrant categories.

From a strict labor market interpretation of the absorption of immigrants, the Portes outline is instructive. However, labor market segmentation is a dynamic concept. Primary labor market jobs can become transformed into secondary labor market positions, and in this transformation, immigrants have played an important role. The observations of the recent changes in the Los Angeles employment base illustrate this. The Marxian labor categories were therefore introduced since they focus on the function of labor in the economy in ways that are applicable to primary, secondary, and enclave classifications, yet by distinguishing between active and reserve labor, they allow for an understanding of how changes in labor market segments can affect the demand for immigrant labor.

The models that are proposed will focus on immigrants as production workers necessary for the regeneration of the economic system. Secondly, they illustrate how the role of immigrants varies in different regional and economic contexts. Thirdly, they depart from a segmented labor market analysis, per se, but view immigrants as supporting an active or surplus labor function, thereby suggesting a broader framework for incorporating notions of segmentation. The models are distinguished by the function performed by immigrant labor, and the outcome of their role in society. Underlying the models is the concept that immigrant workers

represent certain class positions which result in conflicts or acceptance by other classes. The models most related to contemporary Los Angeles will be discussed in greatest depth. These models will follow the categories of labor established by Marx and are summarized accordingly:

Table 2.1

Models of the Absorption of Immigrant Labor

Function	Model	Example	Outcome
Active	1	European immigrants into U.S. (mid-1800's)	Reserve labor expanded
Floating Reserve	2	European immigrants into U.S. (late 1800's)	Reserve labor expanded
Latent Reserve	3	Latin immigrants in U.S. (late 1800's to mid-1900's)	Regulation of reserve labor; change in production technology
Stagnant Reserve	4	Undocumented workers into U.S. industrial sweat-shops (mid- to late 1900's)	Reserve labor expanded; "de-facto" industrialization of low wage labor

Model 1--Active Labor: During the ante-bellum mid-1800's, European male immigrants entered into the economy in a broad range of jobs. Among these were craft and service occupations previously held by free Northern Black workers. According to one account:

> ...immigrants began to displace northern Blacks from jobs they had held at times almost exclusively. There were colonies of free Black workers in Northeastern cities, especially New York, Philadelphia and Baltimore. Frederick Douglass explains that these Northern Blacks were "elbowed out of employment by some newly arrived emigrants..." and that these White men were becoming "house-servants, cooks, and stewards...porters, stevedors...brick-makers, white washers and barbers...coachmen..." all occupations performed mostly by Blacks.[16]

While the immigrants assumed a position of active labor, they forced the Blacks into the reserve laborforce. Displacement by one group of another is not a requisite outcome, but in this case, Blacks, who had been the object of racial barriers, were unable to prevent their own dislocation.

Model 2--Floating Reserve Labor: Later, during the Industrial Revolution (late 1800's), the introduction of mass production required extensive cheap labor of a magnitude that surpassed the supply available from agriculture. This demand was met by successive groups of immigrants, primarily from Europe. However, the acceptance they received during the industrial expansion ended under loose market conditions following World War I. Immigration quotas were established to restrict new flows from Europe (1921 and 1924 immigration quota acts), and with the decline of job opportunities, some immigrants returned to Europe. Nativist movements attacking immigration policies peaked with employment declines.[17] Efforts to assure that the labor market did not become so tight as to result in rising wages and a stronger voice for labor took several forms, including Northern employers sending labor recruiters among Southern Blacks.[18] Immigrant labor became identified as a source to be drawn on during periods of increased production, and restricted during economic contractions (i.e., floating reserve labor). In order to justify this orchestration of the flow of labor, the prevailing ideology adopted towards immigrants as that "on the one hand, the immigrant was welcomed as a workers, and on the other hand, he was rejected as being inferior in the social structure."[19] Though European immigrants were generally relegated to the least desirable jobs characterized by low status and instability due to constant major cyclical or seasonal fluctuations,[20] they nevertheless experienced upward mobility. When Blacks and immigrants competed in the same labor market, it was usually to the detriment of Blacks, who remained marginalized.[21] Thus, the

employers utilized workers on the basis of class (citizenship) and race to maintain the floating reserve.

In his analysis of the period, Alejandro Portes made an important distinction between the industrial Northeast and growth in the West. He comments:

> Underlying the support of northweastern industrial firms for the end of immigration--or least the absence of their opposition to the move--was the availability of another huge reservoir of labor in the southern states...Northern industrialists could thus attend impassively to the closure of the immigration door. The same was not true in the West, where the labor needs of rapidly expanding agriculture, railroads, and mines were not being met. Southern blacks correctly opted for the superior wages and more subdued discrimination of the North, thus depriving southwestern growers and railroad builders of their labor.[22]

Initially it was agricultural growth that led to a demand for immigrant labor, but later it was to keep viable a backward industry.

Model 3--Latent Reserve Labor: Western agriculture developed differently from the rest of the U.S. because of the massive size of the parcels under cultivation. These had been remnants of old Spanish land grants, or land acquired by the government. In recounting the acreage within private ownership, a report noted that during the 1800's, one firm had "amassed almost 700,000 acres in California, and through their control over water rights, they virtually owned still larger tracts..." which led one owner to boast, "he could travel the length of California and never spend a night off his property."[23] The large-scale farms characteristic of the region were worked by armies of hired laborers, in contradistinction to the family farms of the Midwest. The only other part of the nation that had a farms of the Mid-West. The only other part of the nation that had a history of large farms was the plantation South which had been supported by slavery and share-cropping. The demise of slavery and introduction of the tractor, coupled with New Deal agricultural policies which destroyed share-cropping, diminished the need for agricultural labor in the South. Though some western crops also mechanized, labor

intensive production continued on the basis of immigrant, and poor domestic contract workers.

Initially, the immigrant workers were Chinese, and later Japanese, but these groups quickly began to establish their own farms using methods of cultivation from their homelands. Once they were perceived as self-serving and competitive, they were barred from entering the U.S. through highly restrictive immigration quotas (1881 was the first Chinese exclusion act; 1924 legislation excluded all Japanese). However, during World War I, domestic workers, attracted to urban centers, left a shortage of farm labor, so western growers turned to Mexico. The growers' demand for labor roughly coincided with the Mexican Revolution of 1910 when the exodus from Mexico numbered in the hundreds of thousands. As the people emigrating from Mexico and elsewhere grew, so did the campaign by residents to regulate the flow. Among the important legislative controls enacted were the Immigration Control Act of 1917 that put qualitative restrictions on new immigrants, such as literacy, health, and skill requirements; and the National Quota Act of 1924 that put numerical restrictions on immigrants, instituted the day commuter program (green card), and created the Border Patrol. Through 1929 legislation, illegal entry into the country became a felony. Jointly, these acts created burdens for the growers seeking low-cost seasonal labor.

With the Depression of the 1930's, thousands of Mexican workers were deported, further limiting the supply of Mexican labor, though they were often replaced by destitute resident workers. However, during World War II, domestic workers again found more stable, better paying industrial and urban employment. The serious challenge by other sectors for labor was a clear indication that agricultural production technology required change. Instead, agricultural producers treated the situation as though they were confronting another downturn. Rather

than raise wages and restructure production to make farm labor jobs competitive with urban industrial employment, growers lobbied for the creation of a contract labor system, the Bracero Program, established through a bilateral agreement with Mexico.

From its inception in 1942 to its dissolution in 1964, approximately 5 million workers were under contract with the Bracero Program. It was structured such that workers were assigned to agricultural employers, paid a subsistance wage, and provided with basic necessities, though denied the right to organize. Recruitment centers were located along the Mexican border for the convenience of U.S. growers who paid the workers' transportation and subsistence costs. Often people not accepted into the program simply ignored the boundaries and crossed illegally. Thus, the growers benefited from both contract and undocumented labor.

Ultimately, however, with the loss of the Bracero Program, Bracero dependent growers had to change their production technology, and they did so in several ways. Strawberry growers, frustrated in their attempts to develop labor saving technology and faced with growing competition from Mexico, hired green card workers, instituted a piece rate system, and encouraged share cropping. Lemon growers, also turned to green card workers, but they further upgraded the work by initiating a minimum wage, providing benefits, and establishing year round employment. White asparagus growers moved to Mexico, while sugar beet and tomato growers mechanized. With mechanization of selective aspects of tomato production and processing, women were introduced to do sorting at a much lower wage than men. And in many instances, undocumented workers replaced the Braceros.[24]

Within Western agriculture, the immigrant workers functioned as part of the latent reserve because the competition agriculture faced from other sectors in the

region seeking labor, and international competition in the product market, kept wages low. The immigrant labor helped to institutionalize low wage work and regulation of the reserve laborforce through their temporary contract and undocumented status. While domestic workers were at one time substitutable, in many crops they were eventually passed over. Instead, the pool of undocumented workers replenished the labor supply; a gender division of labor further fractionalized the workers; while the potential for mechanization or moving kept the latent reserve from becoming too demanding.

This situation contrasts with the European guestworker program since there the contract labor was expelled when labor shortages eased (a floating reserve function comparable to the pre-Bracero period). A further distinction can be made with migrant Black workers in the mines of South Africa who are regulated by governmental policies of apartheid. In reference to this, Michael Buroway notes that: "The dominant division in the South African labor market is based on relation to the state, whereas that in the United States is based on relation to the economy."[25] With the state as an organizing element in production and market relations, major segments of the population are subjected to a dualistic economy in South Africa. In the United States, the affected population was, and is, significantly smaller. But the primary difference is that in the U.S., agriculture was being transformed, and contract workers provided cheap labor while growers began the process of adjustment (such as research into mechanization). With the termination of the contract labor program, the transformation of agricultural production accelerated.

Model 4--Stagnant Reserve Labor: Though undocumented immigrants had been entering the U.S. from Mexico well before the Bracero Program went into effect, illegal migration picked up during its implementation, and grew even more

when it ended. Today, Mexico contributes approximately half of all such migrants to the U.S.[26] Research on Mexican undocumented workers conducted during the late 1970's showed that the majority were employed in non-farm work.[27] Most are here for short periods of time (less than one year per visit), however, the number of long-term settlers appears to be increasing.[28] The longer an undocumented worker remains in the U.S., the greater the likelihood of realizing a rise in occupational status. For example, temporary migrants are primarily employed as non-farm laborers, farm laborers and foremen, and similar positions that are referred to as "low pay, low status." In contrast, many permanent settlers are employed as operatives, laborers, or service workers in urban areas. One study also determined that "25% of 563 formerly undocumented Mexican immigrants were found to have obtained jobs above the operative level (as craftsmen, clerical and sales workers, managers and proprietors, technicians and professionals) by the time they succeeded in legalizing their status in the United States."[29] Approximately half of these workers find their way to California, where Los Angeles is a particularly favored location.[30] Here, despite the trend towards a rise in occupational status, many remain locked into sweatshops where industrial exploitation takes the form of less than minimum wages, lack of due compensation for overtime work, cash wage payments with no contributions for taxes, social security, or unemployment insurance, and no benefits, such as sick leave.

Sweatshops have been recorded in a number of sectors, though in Los Angeles, the most fragrant cited abusers have been in restaurants and the garment industry.[31] A variant to sweatshops is homework, where part of the production is relegated to the home, an occurance common in electronics.[32] The workers are classically secondary labor market in status, and the employers are usually entirely dependent on an immigrant workforce. In many instances, employers are sub-

contractors operating in a highly competitive climate, who bid the work at a low rate then supply the product to a final assembler. The sub-contractor often performs work that has in other firms been shifted to international subsidiaries where wage levels are a fraction of those in the U.S. Thus, their options for remaining viable are limited to labor intensive sweatshops; automating, an expensive and often not feasible alternative; or also internationalizing. Within these shops, stratification of workers by immigrant status, race and sex is a frequent pattern. Whole job sites may be composed of one immigrant group, or separated by department, and further segregated by sex, thereby preventing worker unity by creating competition among them.[33]

Workers in these industries appear to comprise the stagnant reserve. One view of these workers is that their employment displaces domestic labor, and in the process, puts many domestic workers into the stagnant reserve. In light of the limited options, it is doubtful these jobs would ever be available to U.S. workers at standards required for maintaining a subsistence level of income. However, some sectors which were once dependent on sweatshop workers (such as electronics) are beginning to automate. Should this become widespread, the process of industrial devolution would in actuality be a step in their transformation, not a final outcome, and the usage of stagnant reserve labor in the short-run can be viewed as performing a latent reserve function in the long-term.

The examples given in the models show undocumented workers entering into two roles, as latent and stagnant reserve labor. As latent reserve, they facilitate a downward pressure on wages. For an industry in transition, domestic workers expecting parity in their remuneration and a voice in the workplace could actually inhibit this change. They may expect compensation for their employment instability firms aren't willing to provide. Contract labor and undocumented

workers give the employer leverage over wages and working conditions, which is particularly important to industries in decline. In their conflicted position, latent reserve immigrants support a declining capitalist class, who in turn, destabilize the prevailing working class. By using workers in this way, unemployment is a natural complement. Though domestic workers may seek jobs, immigrant labor is preferred. This dual trend of domestic unemployment coupled with immigrant employment is more apparent in contemporary manufacturing than was evident in western agriculture. The farmworkers would rather have had industrial jobs, and while manufacturing was expanding, they chose that option. Todays unemployed industrial workers have neither the same potential for sectoral upgrading nor the prospects of a growing employment base. In light of the structural transformation of basic manufacturing, latent reserve also exemplifies the role of undocumented workers in Los Angeles. The purpose of this labor is by definition a transitional one, and in that respect, latent reserve more accurately describes the workforce than do segmented labor market distinctions. Table 2 below illustrates these points.

Table 2.2

Labor Employment During Different Types of Economic Activity

Segmented Labor Market Categories	Primary			Secondary
Characteristic Employment	Active	Floating	Latent	Stagnant
Enters during expansion of economic activity	o	o		o
Enters during contraction of economic activity			o	o
Supports change in method of industrial production		(could be seen as inhibiting change)	o	(could be seen as employed in technically non-evolving industries)*

*perhaps a temporary condition

The Spatial Organization of Industrial Activity and the Role of Immigrants

The recent period of industrial restructuring in basic manufacturing has redefined economic activity spatially. The previous urban order reflected different productive and social relations from those manifested in the contemporary urban hierarchy. Towards this change, immigrant labor contributed to the reorganization of declining manufacturing activities, while in another capacity, helped usher in the growth of services. Significantly, this labor tends to be distributed unequally across the nation and is concentrated in the urban centers of rising prominance. This section will discuss the urban restructuring taking place in order to illustrate the spatial implications of the latent reserve function of immigrant workers in basic manufacturing.

Though many analysts have studied the sunbelt/snowbelt shift in productive capacity, and the manufacturing/services transformation within the national economy, the work of Thierry Noyelle and Thomas Stanback is particularly illuminating because of their integration of the trends. In summarizing their observations, Noyelle recently described the "current restructuring of capital and labor in the United States and its impact on spatial organization" in the form of three propositions. In his words:

> The first proposition is that, over the past fifteen years, the U.S. economy has been experiencing a major structural transformation that is closely related to changes in the international economy. This transformation not only consists of a restructuring of capital, in which domestic employment and output in manufacturing have stagnated relative to parts of the service sector while certain activities of United States corporations have become increasingly internationalized; it also consists of the restructuring of labor--both domestically and internationally--marked by an increased division between highly skilled mental and technical labor and unskilled manual and clerical labor.
>
> The second proposition is that these structural changes in the American economy are proceeding along with a transformation of the economic structure of the U.S. system of cities. The reorganization of manufacturing production and the growth of service activities are altering substantially the economic base of many urban areas and redefining relations of dependence among metropolitan centers.
>
> The third and last proposition is that this urban transformation is thriving on and occurring because of the simultaneous transformation of employment systems within metropolitan labor markets characterized by the emergence of new forms of segmentation.
>
> A major conclusion...is that a new dual economy is emerging in U.S. metropolitan areas, one that differs sharply from the dual economy of the immediate postwar era during which the dichotomy between monopoly and competitive firms constituted the main axis of segmentation. The new dual economy is the result of the two new axes of segmentation: (1) the tendency toward increased bifurcation within the large corporation's labor force itself, and (2) the tendency toward increased specialization in the large corporation's use of geographical space.[34]

The underlying concept is that Taylorist principles of task fragmentation combined with Fordism (mass production, mass consumerism, welfare economics, military-industrial growth, and U.S. international superiority), fundamental to the

structure of manufacturing production, disintegrated beginning in the late 1960's due to a combination of factors (including a change in the basis of international monetary exchange, a challenge by foreign producers in U.S. markets, the mobility of production, and a crisis of collective consumption). As U.S. manufacturing production became increasingly decentralized, locating in sites with ever cheaper labor (such as the South, but particularly in foreign locations), ownership and control became more centralized, and dependent upon distributive and producer service activities for their maintenance. Distributive and producer services refer to "intermediate inputs in the production process," such as "transportation, communications, utilities and wholesale trade," or research, banking, insurance, real estate, accounting, legal services, and the like, respectively.[35] The shift in productive activity has led to a dichotomization of work: a heightened need for both highly skilled and low-skilled labor (a vast expansion of the stagnant reserve in the broadest sense, not simply sweatshops). Intermediate level jobs were lost through deskilling and the reorganization of production.

Urban areas that had previously been centers of manufacturing suffered from unemployment, a loss of their base of revenue, and a drain on their social services. Those locations that had not developed a strong service sector became dependent on cities which had captured this capacity. Ultimately, a new urban hierarchy was taking shape, "one in which new relationships of economic dominance are being developed, between service-oriented, decision-making centers on the one hand and production-oriented, dependent centers on the other...,"[36] with the most nationally prominent of the distributive and producer service centers being New York, Los Angeles, Chicago, and San Francisco.

The emergence of these centers required a successful transition from a manufacturing to a service based economy. Studies on New York and Los Angeles,

in particular, call attention to the pivitol role of immigrant and undocumented labor, though the same observations apply to Chicago and San Francisco, which had also been significant recipients of this laborforce.[37] First, immigrants and undocumented workers, by their employment in basic manufacturing, performed a (temporary) latent reserve function which led to a lowering of the prevailing wage and fractionalization of the working class. Among Los Angeles automobile parts suppliers (to be discussed in subsequent chapters), this disengaged employers from workers' expectations of high wages and employment stability, while providing control in the workplace over the resident population. The relatively unnoticed transformation accomplished through the substitution of one form of labor for another had a more visible counterpart in the wage and benefit concessions of organized labor. Both were part of the dismantling of labors' position vis-a-vis capital.

Secondly, immigrant and unodcumented workers constituted the bulk of the stagnant reserve feeding into the peripheralized sectors such as garment, where in reality, they are comparable to Third World workers (i.e., they are the Third World brought home).

Thirdly, they constituted a portion of the stagnant reserve accompanying the rising service activities. In restaurants, hotels, laundry facilities, car washes, and the like, they support the lifestyles of the high-tech, high-finance, international business segments of the population who are increasingly disassociated with the home. Thus, they are integral to the reproduction of the new social strata.

These functions performed by the immigrant and undocumented laborforce have been indispensible to the restructuring of the dominant urban areas. The marginalization of production and service work characteristic of the contemporary period necessitated a devaluation of the domestic workforce. However, lowering

the average U.S. worker to immigrant standards would be destructive to the economy because working class capacity for mass consumption which regenerates the economic system would dissipate.

Concluding Remarks

Immigrants, and particularly undocumented workers, pose difficult problems in society. Within the sphere of production, working class conflicts arise over the allocation of jobs; degradation of work; race, sex, and citizenship based stratification of workers; and fragmentation of power. The class conflicts benefit owners and managers, who further profit from immigrant workers in the realm of social reproduction, since the social costs for maintaining and recreating the laborforce are transferred to the family or the home country, rather than society at large, or the employers. Historically, the social disruption generated by the immigrant and undocumented workers have led to a dismantling of the apparatus allowing their usage (e.g., termination of the European guestworker programs and the Bracero Program), or to further state intervention into the regulation or availability of labor (e.g., immigrant exclusion acts). Unless immigrant dependent sectors can turn these measures to their favor (e.g., creation of a guestworker program), the outcome is increased control by the state in the private arena. State intervention is felt unevenly, however, since the most competitive and peripheralized industrial sectors generally are the main targets.

The social costs of restrictive legislation given the present reorganization of productive capacity are extensive. First, institutionalization of a temporary workforce, such as guestworkers, would simply provide a grace period for less efficient producers. Alternatively, actions to prevent the existence or employment of undocumented workers through increased surveillance, employers sanctions, and worker identity cards will force employers to adopt radical responses for sheltering

their market positions (e.g., hiring underground labor, automating, restructuring work, or moving to foreign locations), while simultaneously placing domestic workers in the uncomfortable position of becoming more like these workers (by lowering their social benefits and wages) in order to be suitable replacements. Both of the latter developments seem to already be unfolding. Lastly, if the situation is left alone, the sectors dependent on stagnant reserve immigrant labor would probably continue on their course, while latent reserve dependent firms would do so only until they have completed their period of transformation. In this latter instance, the workers are transitional labor, a concept that will be analyzed in greater depth in subsequent chapters beginning first with an overview of the automobile industry, followed by case studies.

Considerable debate over appropriate immigration, industrial, and urban policy has developed out of the recent crisis of production and collective consumption in the U.S. Rarely are the issues integrated in a way that illustrates the importance of latent and stagnant reserve immigrant workers in the U.S. labor market. The concluding chapter will return to this point with a discussion of policy implications in light of the role of immigrant, and particularly undocumented labor in a changing economy.

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CHAPTER 3

INDUSTRIAL RESTRUCTURING AND THE AUTOMOBILE INDUSTRY

Introduction

For nearly seventy years, from the 1910's to the mid-1970's, the automobile industry dominated manufacturing trends in the U.S. Mass production technology developed by Ford and General Motors (GM) became models for other industries. Industrial relations forged between the auto makers and the United Auto Workers* (UAW) set nationwide wage and bargaining patterns. After World War II, automobile manufacture and consumption had become so integral to national prosperity that by 1979, one out of six jobs were directly or indirectly related ot automobile production.[1] But during the prolonged recessions of the late '70's and early '80's, the industry showed a significant lack of resilience. Major automakers faced bankruptcy, unionzed workers conceded numerous hard won gains, and plants ordered lay-offs and closings. Beyond any simple adjustments, the industry faced major reconstruction. According to one industry analyst, "the profound changes made by the automobile industry between 1976 and 1982 may [have constituted] the largest shift in technological, human and capital resources in...U.S. industrial history."[2]

Numerous factors including heightened foreign competition, rising oil prices, and management intransigence weakened the auto companies during the '70's and jointly accelerated the industry's rapid loss of prominence throughout the decade.

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*United Automobile, Aerospace, and Agricultural Implement Workers of America.

Yet, in reality, the manufacturers had begun to lose their competitive edge earlier. Key indicators revealed the long decline. From 1955 to 1980, U. S. production of all autos made in the world dropped from 72% to 20%.[3] In 1980, the number of vehicles produced in the U.S. returned to the same number produced in 1960, only 8 million.[4] Industry profits plummeted. Finally, by 1980, "U.S. automobile factories were running at only about half of capacity, and the industry lost more than $4.2 billion--an amount that may [have been] a record for one concentrated sector."[5]

Production losses among the four large auto makers accounted for only part of the problem. Thousands of auto parts suppliers and their employees were also affected. According to one estimate, in 1979, approximately one million workers were employed by vehicle manufacturers, but "nearly twice as many were employed by the parts suppliers."[6] As hundreds of thousands of workers in the "big four" began to lose their jobs and relative bargaining power, untold others working for sub-contractors suffered parallel experiences.

Although some of the industry's problems were the result of decisions or conditions specific to auto producers, in many ways they were illustrative of a larger industrial trend. A wave of disinvestment in basic manufacturing swept the country resulting in what was referred to as the "deindustrialization" of America.[7] The late 1970's and early 1980's marked an unusual period in U.S. economic history. It ws apparent that basic manufacturing industries in the U.S., such as auto, steel, and rubber, were struggling in an increasingly competitive international market. During the previous decade, the United States suffered two severe recessions: December 1969 to November 1970; and November 1973 to March 1975; and began 1980 with yet another recession. For firms in older manufacturing industries, these were not felt as mere cyclical or seasonal fluctuations in the economy. With each downturn, those in particularly weak market positions submitted to hard times by

shutting down. Chronic capital flight became symptomatic of the period. Survival for other firms necessitated severe employment cut-backs or major changes in their production technology. It became immediately important for them to have access to low-cost, easily-dismissed workers. As the nature of jobs changed, so did the demand for labor. With each recessionary swing, new employment patterns emerged. The economy in transition moved towards employment in high technology, light manufacturing, and services, and away from the rapidly declining heavy manufacturing.

This period of industrial transformation had a profound effect on labor. Many of the older jobs had been associated with the primary labor market, and with the loss of basic manufacturing, these were lost as well. Just the threat of closure led to wage and benefit concessions on the part of workers attempting to salvage their positions. Even more unsettling, the industrial change was accompanied by the employment of undocumented workers in Los Angeles, a major U.S. industrial center. The shift toward a labor force normally identified with marginal sectors in the nation's most important, albeit declining, industries was problemmatic. It suggested that the bargaining position and employability of U.S. workers had lost even more ground than had originally been acknowledged.

The appearance of undocumented workers in a period of transformation, however, also provided an opportunity to learn more about the impact of the industrial change on labor. The automobile industry was therefore studied because it has been one of the nation's key manufacturing industries. In addition, the auto industry sheds light on both oligopolistic and competitive segments of the economy. Within the automobile industry, assemblies represent "core" firms that dominate product market conditions. Relative to assemblies, parts suppliers operate at the "periphery" of the product market since their demand is a derivative of the demand

for either new cars (the original equipment market, OEM), or for replacements and accessories (the after-market). The manufacture of automobiles consists of approximately 10,000 parts that are assembled by the major auto makers. Only the most critical parts, like the engine, or body are made by the auto makers or their subsidiaries. The remainder are supplied by a variety of firms scattered around the U.S., but largely concentrated in the Midwest. The assemblies and suppliers responded in different yet parallel ways during the industrial restructuring. Thus, the automobile industry illustrated how the current economic crisis was felt by firms with vastly different capacities for sheltering themselves from the vagrancies of the economy. The Los Angeles experience further showed how the strategies for survival among these firms included the employment of undocumented workers. Because the auto industry is offered as a window for understanding the broader process of industrial change, the analysis will be cast within a conceptual framework of structural transformation. The theoretical and historical framework described in the following section will set the context for the subsequent discussion of the automobile industry.

A Framework for Analysis

There have been several phases of industrial transformation in the U.S. During transformations, new socio-economic relations, or what Michel Aglietta in A Theory of Capitalist Regulation: The U.S. Experience calls structural forms, emerge. These structural forms embody relations within capital, and between capital and labor, in light of prevailing social institutions (e.g., governmental regulations, consumptive patterns, labor organizations). Each transformation arises from crises, or ruptures in the system. The dynamic behind the crises is a constant drive by capital to produce more and at lower costs in order to derive profits, yet acting in tension with labor striving for higher wages and a greater

stake in the forces governing their socio-economic well-being. Out of the struggle develop the new structural forms.

Several social historians and analysts have formalized the major periods of transformations, notably (though not restricted to), Mandel; Aglietta; Davis; Gordon, Edwards and Reich; and Soja.[8] A synthesis of their periodization is offered below.

Table 3.1

Periods of Capitalist Structural Transformation

(1)	1790's to mid-1840's	Mercantile Capital
(2)	mid-1840's to late 1890's	"Competitive" Industrial Capitalism
(3)	late 1890's to 1940's (WWII)	"Monopoly" Capitalism--introduction of "Taylorism" and "Fordism"
(4)	1940's to present	"Global" Capitalism--"Neo-Fordism"

Although these periods of economic expansion met by crisis and transformation capture distinctly different structural forms, there is a continuity in the interactions between capital and labor from one period to the next. A brief review of some particularly salient characteristics of monopoly and global capitalism illustrate this point. The focus is on the structure of capital, characteristics of the industrial laborforce, the utilization of labor, and the role of working-class consumption.

The term "monopoly" capitalism is attributed to the works of Baran and Sweezy to connote a tendency for surplus to accrue in the monopoly sector.[9] According to this conception, productivity gains result in super profits which are distributed among monopolies, in contrast to the notion that large corporations of

advanced countries also experience a falling rate of profit. Use of monopoly capitalism here does not assume the relationships posited by Baran and Sweezy. Rather, it refers to a consolidation of capital and an expansion of the sphere of competition to the international arena, supported by the acquiesence of labor and state institutions. From this perspective, "monopoly" capitalism began with rapid industrialization during the turn of the century. New enterprises initially proliferated the economic landscape, but through successive waves of vertical and horizontal acquisitions and mergers (1890-1905, and mid-1920's through the 1930's), the competitive pool kept shrinking.[10] With the rise of conglomerates, the concentration of production, and extensive overseas investment (imperialism), control of product markets consolidated around corporate giants.

The industrialization absorbed labor off the farms and from foreign countries. Many European immigrants sought refuge and opportunity in the U.S., while bringing their socialist or anarcho-syndicalist traditions that led to the establishment of unions. Embracing aspirations of assimilation, their purpose for unionization was to enfranchise themselves economically within the existing political and economic system.[11] Yet, as they were repeatedly subjected to erratic spurts of mass employment and unemployment, coupled with expolitative labor processes, this nascient industrial workforce clashed violently with the burgeoning industrialists.

The labor process refers to the way in which labor is employed as a strategy for controlling production. Karl Marx identified the main elements as labor, the products that are transformed, and the technology employed.[12] Employers use the labor process to exert control over workers through the organization of work (e.g., allocation of tasks, supervision, spatial division of labor). Alejandro Portes and John Walton incorporated the notion of control over labor when they defined the

labor process accordingly, "by this we mean the modes in which workers are controlled and utilized in different areas of the world-system and their reactions to the changing organization of surplus extraction and political domination."[13] In light of this definition, the labor process characteristic of monopoly capitalism were Taylorism and Fordism. The labor process is linked to the periods of capitalism in that the way in which labor is used defines the structure of production. Furthermore, the wage relationship establishes the stability and extent of personal disposable income which, in turn, become the basis for both the extent of working class consumption and the social institutions needed to maintain this consumptive behavior.

Taylorism, or "scientific management," came to prominence through the time and motion studies of Fredrick Taylor (1890's-1920's). Taylorism refers to the reorganization of production into discrete tasks in conformance with the machinery used for the purpose of accelerating the completion of work. As tasks became fragmented, production workers lost the ability to oversee the entire manufacture of an item, while simultaneously transferring some of their skills to machines. Physical tasks were further separated from the mental skills that supported them. Thus, in the name of efficiency, work groups that had been the basis of production were destroyed and replaced by norms of personal efficacy, thereby alienating workers from each other.

Fordism succeeded Taylorism. Under Fordism, a concept popularized when Henry Ford introduced the conveyor belt (1914), tasks became routinized and mechanized. The semi-automatic assembly-line production, combined with the fragmentation of tasks (Taylorism), revolutionized work, facilitated the speed-up of production, and challenged the early craft-union structure. Widespread adoption of Fordism extended beyond production into the sphere of social reproduction

through commodity relations and national policies. By stabilizing wages and introducing mass production, consumer durables were generated for the working class.

Yet by the 1930's, consumer goods poured into an emanciated market. With the Great Depression, an agitated working class, suffering from high unemployment (on the heels of constantly fluctuating employment), weak consumptive capacity, and alienation at work, fought back. The labor insurgency that ensued, and collapse of the economy required radical solutions. One was the historic contract between the UAW and GM (1947) in which workers gained assured cost of living raises combined with wage increases based on improved productivity.[14] This agreement marked the beginning of the "social contract," a tacit agreement between workers and their employers that domicility and productivity on the part of labor would be rewarded with relative stability in employment and decent wages. Another development that benefited both capital and the working class was the expansion of credit systems and social institutions ("the social safety net") that further stabilized the nominal wage of workers and encouraged their consumptive behavior. Lastly, Keynsian policies of demand management through fiscal and monetary controls shifted some of the market uncertainty from capital onto the state. Thus, Fordism ultimately redefined the social system by the combined use of Taylorist principles, generalized mechanization, mass production, and macroeconomic and income redistributive policies.

The reconstituted capitalism that emerged from the Second World War, bolstered by extensive governmental institutions yet encumbered by the expectations of labor, entered the period of global capitalism. In contrast to monopoly capitalism, global capitalism is defined by capitalist expansion made possible by a loss of national controls over capital and labor with respect to the

regulation of production, in large part because of the mobility of capital, and technological advances. With a new set of rules to abide by, the economy picked up. Another series of acquisitions and mergers followed (1949-55, 1964-68, 1973-80's), continuing the trend toward concentration of power in the market place.[15] At the same time, corporations began to decentralize production around the United States, ostensibly to place themselves closer to the final market, but frequently as a strategy to capture lower cost labor. And as a result of monetary agreements favoring U.S. investors coincident with a fundamental reconstruction faced by other industrialized nations, U.S. corporations intensified their foreign investments. Barry Bluestone and Bennett Harrison summarized the developments in the following way:

> The United States emerged from the Second World War with the only major functioning army, with more than half of all the usable productive capacity in the world, and as the banker and creditor to both former allies and enemies....
>
> America's domination of the global economy was cemented by the establishment of the dollar as the capitalist world's principle reserve currency at the 1944 Bretton Woods Conference.... Under the system of international payments that prevailed until 1971, each nation was responsible for keeping the value of its currency within 1 percent of its par value. To keep it within that range, the central bank of each country was required to sell or buy its own currency on foreign-exchange markets. By running persistent and large capital-account deficits in its balance of international payments, the United States effectively forced foreign central banks to buy excess dollars with their own currencies in order to decrease the supply of dollars in circulation. This provided American investors with the francs, marks, and other European currencies necessary to buy assets in France, Germany, and elsewhere. Thus, the price for international stability, foreign central banks were put in the awkward position of financing the takeovers of their own countries' industry.
>
> In this environment, American corporations were able to make massive investments abroad in new plant and equipment, producing commodities for foreign markets, and later on, for re-importing back into the United States itself. These direct shifts of private American capital became truly enormous during the 1960s.... The proportion of total plant and equipment investment located outside the United States doubled in the metal and machinery industries, from an annual average of 14 percent during 1957-61 to 28 percent during 1967-70. By the early 1970s, nearly one third of the annual U.S. automobile company investment was being placed abroad.[16]

With the dollar as the basis for trade and finance, U.S. corporations dominated international markets. However, during the 1960's, the U.S. dollar was seriously overvalued, which threatened the stability of the Bretton Woods system, and inhibited investment in the U.S. Finally, in 1971, President Nixon allowed the dollar to float, marking the end of the accords. Non-U.S. corporations penetrated U.S. markets, taking the lead in the production of some goods (e.g., televisions, radios), and seriously challenging others (e.g., auto, steel, electronic devices). U.S. corporate profits plunged. From a 15.5 percent annual return in the mid-sixties, profits dropped to 9.7 percent by 1978.[17] The search for new avenues of investment sent U.S. corporations in several directions. Buy-outs of related industries for the purpose of milking them while letting physical capacity deteriorate was one solution. Another was to simply purchase firms in completely unrelated industries so as to gain a quick profit. Alternatively, U.S. corporations interested in foreign markets would trade their technological knowledge for a license to operate or buy stock in foreign firms, and engage in co-production agreements with foreign companies producing for international markets under U.S. labels.[18] Second-sourcing, a practice made common by the U.S. defense industry, and parallel production further cut the costs of multinationals until a global level of economic competition eventually defined the climate for survival. Internationalization of production combined with the use of interchangable parts spawned a new generation of production technology typified by the "world car." Seen as a way to undermine labor insurgency, Ford introduced the Fiesta in 1976, the first car to be assembled from parts made around the world. With the different locations competing against each other for the production of parts, Ford maintained ultimate control over labor demands.

The movement to international sites were two-fold: to penetrate the foreign markets, as previously described; and to produce goods more cheaply for the U.S. markets. Towards these ends, favorable tax codes and tariff items facilitating the moves were instituted. For example, U.S. tariff codes 806.30 (passed in 1930) and 807.00 (passed in 1963) supported the export of the assembly of products by taxing only the value added upon re-entry. By 1963, U.S. electronics firms were establishing "integrated global assembly lines" in the export processing zones (EPZ's) of Asia and in 1965, with the creation of the Border Industrialization Program (BIP) in Mexico, electronics and garment firms were flocking there as well. The EPZ's mushroomed in Third World nations, attracting firms in every conceivable type of manufacture. In 1965, there were twelve plants in the initial 12.5 mile strip of the BIP in Mexico. By 1979, 476 plants were located in the border zone, and another 55 in zones established in Mexico's interior.[19] Each U.S. firm that moved to EPZ's around the world forced competitors in the U.S. to meet the lower costs of production, whether by automating, lowering their labor costs, or also moving.

That firms were geographically mobile was in part a function of their technological maturity in the product life cycle. Product life cycle "is the name given to a set of concepts describing the development of an industrial product and the state of the art in producing it from the stage of innovation, through the stage of rapid change and development, to the stage of maturity and standardization."[20] During its early stages, a product goes through continuous innovation and constant changes in design. As a result, research and production work need to be located near each other. But as the demand for a product stabilizes, mass production can shift to areas where labor is inexpensive. Thus, the stages are associated with both a change in demand for different types of labor, and location. Furthermore, the

product life cycle concept introduces an element of time into the location decision in that the choice to move is no longer viewed as solely constrained by the existence of resources or markets, but by labor conditions, as well. Accordingly, automobile assembly plants, representing mature segments of the industry, have looked for low-cost labor and access to the final market since 1910. Parts producers, on the other hand, subjected to constant re-tooling, could only move to areas of low-cost labor if they reached the point of mass production, so most have remained in locations with concentrations of skilled machinists. Seen in this light, capital mobility has often been a geographical response by industries in conflict with labor made possible for technological reasons.

The hyper-mobility of the period destabilized labor in the U.S. and globally since capital could orchestrate production to the lowest cost, least labor resistant sites through moving, parallel production, and second-sourcing. Workers in developing nations became proletarianized and linked through the assembly-line to workers in the industrialized nations. Proletarianization meant the newly industrialized workers were increasingly dependent on the consumption of mass produced goods, though their incomes remained a fraction of that earned in the U.S. U.S. production workers, on the other hand, were faced with job loss, wage and benefit concessions, and few employment alternatives resembling the high-wage jobs or employment security they had struggled for in basic manufacturing. In place of the Taylorist and Fordist processes of the previous period, some workers were reorganized into job enrichment groups coupled with sophisticated automated machinery which jointly allowed for a more continuous flow of work while simultaneously disrupting the craft and assemblyline basis for union organization. This new form of labor control led Christian Palloix to term the contemporary labor process "Neo-Fordism."[21]

The effect of the deindustrialization in the U.S. was to undermine workers in the "subordinate primary" labor market. Traditional segmented labor market classifications are divided into secondary and primary categories. The secondary labor market is composed to low-skilled, low-wage jobs with little or new job security. In contrast, jobs in primarly labor markets offer stable employment, job security, internal occupational mobility, higher wages, and employee benefits. Building on the work of Michael Piore, Richards Edwards points out in Contested Terrain that segmentation of the laborforce is a fluid concept which requires periodic redefinition.[22] In response to contemporary occupational shifts, Piore and later Edwards refined the primary labor market concept into "subordinate" and "independent." Independent primary jobs (such as technical or professional positions) are of high value to the employer, and therefore are retained at high costs. Subordinate primary jobs, on the other hand, obtain their favored position in large part through constant struggle by workers. They would resemble secondary labor market jobs were it not for gains extracted by organized labor. However, with many basic industries in disarray, these jobs are being devalued. Rising to fill the void in basic manufacturing jobs has been employment in the lower paying service and light manufacturing sectors which, as Emma Rothschild notes, are generally slotted for women, and characterized by shorter work weeks, fewer occupational ladders, higher turnover, and less union security.[23]

In some parts of the country, like New York, Houston, Chicago and Los Angeles, the displaced and other workers (underemployed, low-skilled, and workers in industries undergoing transformation) were further marginalized by employers' preference for immigrants. The expanded labor supply allowed employers to redefine workplace conventions. For example, many electronics and garment manufacturers, noticably challenged by foreign competition and the trend towards

production in export processing zones, relegated their most labor intensive work to subcontractors who, in turn, established sweatshops or revived the practice of homework, both aimed at taking advantage of immigrant workers.[24] Other firms wouldn't violate labor standards legislation, but simply paid the minimum wage which seriously lagged behind the cost of living. With wage levels that forced families into poverty level incomes, U.S. workers deferred jobs to immigrants.[25] Finally, firms in the midst of industrial restructuring turned to the immigrant population as a temporary strategy for maintaining production until a longer term market solution could be established, such as moving abroad, changing their product lines, or automating. Together, the new patterns for employing immigrants put a downward pressure on prevailing wages, weakened working class solidarity, and assisted in the transformation of the employment base.

As employers responded to their loss of markets and drop in profits by abandoning U.S. sites or undertaking exploitative labor practices, the "social contract" was irrevocably violated. Given a subsequent decline in productive capacity and high unemployment, social institutions supporting the social wage were overtaxed relative to the contributions (productivity) of labor. Public and private savings ebbed further inhibiting investment, while pricing based on regulation in public or semi-public industries meant that the cost of these goods had become inflated.[26] Finally, at the height of transformation, the decline of global capitalism was distinguished by dual tendencies for increased concentration of ownership coupled with dispersed production; capital mobility; heightened subcontracting, out-sourcing, parallel production, and automation; destructive corporate investment policies; erosion of the subordinate primary labor market; the marginalization of labor; and a crisis of collective services.

Restructuring of the Automobile Industry

During the transformations of monopoly and global capitalism, automobile manufacturers adopted corporate policies that were intended to place them in advantageous market positions. Some policies worked in the short run, but backfired during the crises. Others set the pace for industrial trends. But in many ways, these policies seemed to capture the prevailing corporate positions across industries, evident by tracing historical developments in the auto.

Initially (early 1900's), auto and other metal fabricating industries were concentrated in the Midwest largely because of their ties to regional steel mills and iron ore extraction. The first manufacturers applied two fundamental concepts to their method of production previously used in the bicycle industry: precision-made interchangable parts; and mass production. These production concepts standardized the flow of work and inadvertantly, facilitated the mobility of firms. Due to an accident, a fire at the Olds Motor Works plant in 1901, the assembly unit was built apart from the other operations, and it was learned that different steps in production could be physically separate. Later, as a conscious decision, Henry Ford built an assembly plant in Kansas City, Missouri (1910) illustrating that the benefits of locating an assembly unit near consumers overshadowed the freight rates for shipping parts. With these moves began the pattern of assemblies locating close to their regional markets while parts producers remained centralized near Detroit. As one author noted: "Taken jointly, these moves recognized and probably encouraged the development of economies of scale in component manufacturing, while they minimized the employment impact in any one region [created by the assemblies]."[27]

At approximately the same time the industry began to decentralize, Henry Ford introduced another innovation that had an equally significant impact on labor,

the moving assembly line (1912). Though technically efficient, the assembly line was plagued with a 60% labor turnover rate.[28] Ford's well-known solution, the eight hour workday at $5 per day (double the previous rate of pay), so changed productivity it set a precedent for other industries, and became the basis for Ford's initial formula for success in the market.

In the early years, car makers proliferated. Sixty-nine automobile manufacturers were producing cars in 1909, but seven years later, this number had been reduced by one-half, and by the '20's, the field was dominated by Ford, GM, and Chrysler. During this highly competitive period, technological, organizational, and marketing innovations flourished, giving the lead to the most aggressive and creative firms. At first, the market leader was Ford, but they lost out to GM in 1926, and dropped to less than 25% of the market share by 1930.[29] Insight into the corporate policies of Ford and GM resulting in the dominance of GM is instructive because these policies were repeated during the economic crisis of 1970-80's.

In the 1920's, Ford's market strategy was to produce a standardized product for mass consumption. They kept designs straight-forward, easy to assemble, and relatively undifferentiated. For several years, the car design was fundamentally unchanged. To maintain consumer interest, they dropped the selling price. GM, on the other hand, adopted continuous innovations which added to the production time and the cost of the final product, but allowed variety in the market. Apparently, the GM approach appealed more to purchasers who, through their selections, gave the lead to GM. In hindsight criticism of the Ford strategy, Alfred Sloan, former president of GM once commented:

> Mr. Ford had unusual vision, imagination, and foresight - [his] basic conception of one car in one utility model at an ever lower price was what the market, especially the farm market, needed at the time....[However], his concept of the American market did not adequately fit the realities after 1923. Mr. Ford failed to realize that it was not necessary for new cars to meet the need for basic transportation...used cars at much lower prices

> dropped down to fill the demand.... The old master failed to master change."[30]

Change became the hallmark of GM. The industrial giant introduced new models, style changes, and innovations on a yearly basis. As the consumer market grew, the company encouraged multiple car ownership and trade-ins, packaging cars as trendy objects to be discarded when the new fashion appeared. At times their methods for assuring a market were even more manipulative. During the 1930's and '40's, they supplied the finances for a bus service, National City Lines, Inc., to buy up trolley systems across the country, which the company then abandoned. The lasting effect of this action was reported in the following account:

> Perhaps the most striking example of what happened is in Los Angeles....Los Angeles once had a heavily used urban rail system extending from Newport Beach and Long Beach, through downtown, on to Pasadena, and into the San Fernando Valley - perhaps the best system in the country. [GM and National City Lines] bought and dismantled it in stages during the 1940's. Taxpayers now are faced with building a similar system at a cost of billions.[31]

By destroying urban mass transit systems, GM fostered a dependency on the automobile that changed the urban landscape across the nation. However, when consumer purchasing power dropped during the 1930's, personal car sales declined as well, and didn't pick up until the end of the Second World War. The heightened demand for autos during the 1950's sent parts suppliers and assemblies searching for ways to increase output. Key parts producers responded by introducing new technology, while the assemblies decentralized at a faster pace, seeking proximity to their distributors, and a dispersed laborforce.

Automation, combined with the newly introduced "systems analysis," swept through suppliers, changing the method of production among sophisticated and simple parts manufacturers alike. The following examples are illustrative of the developments of the period:

> Transfer lines were coupled with automatic machine tools to create long machinery lines that could produce engine parts, such as the cylinder block,

> virtually without operator intervention. In body-parts manufacturing, automatic-feed mechanisms were coupled with high-speed stamping presses to increase producitvity in sheet-metal forming. In many other areas where designs were relatively stable, such as radiator production, entire automated lines replaced manual operations.[32]

The only function that couldn't automate at the same rate was assembly, so selective automation along with lower labor costs at dispersed sites became the method for increasing productivity at this stage.

The move away from Detroit became significant during the 1950's as a combined result of defense policies, labor unrest, increased automation, and the rising suburban market. The most minor factor was President Truman's National Industrial Dispersion Program of 1951. This was introduced as a strategy for protecting the nation's industrial base from foreign aggression. Were Detroit selected as a war target, auto (a prime defense industry) could conceivably be destroyed. The idea behind Truman's program was to encourage the relocation of plants outside of defined target zones through accelerated tax amortization schedules.[33] While this was hardly the decisive factor leading to decentralization, it nevertheless rewarded firms that moved.

Far more significant was the fact that industrial concentration also concentrated the forces of labor insurgency. Particularly problemmatic were strikes and union demands over job instability. Employment in the industry has constantly fluctuated because of planned obsolescence and annual style changes which, in turn, required frequent periods of retooling. A unified laborforce that could demand compensation for economic uncertainty was also seen as powerful enough to resist new labor saving technology. In order to introduce automatic controls and electronic devices, auto makers found it was easier to move to non-unionized areas and automate new plants than to stay in unionized locations. And with each work stoppage, the move away from Detroit accelerated. One industry

analyst described the situation the following way:

> The most unpredictable labor market in the entire economy is to be found in the automotive industry and the most mercurical labor center is unquestionably Detroit. ....Work is seasonal; mass lay-offs invariably occur during the model change-over period.... The instability of the industry is further aggravated by the fact that the product marketed is one whose purchase can be deferred if signs of recession set in....
>
> This uncertainty has led to the creation of the powerful United Automobile Worker's Union which has secured high wage scales for its members to offset the disincentives of assembly-line monotony and seasonal lay-offs. Few industries have had labor-management relations which have been so marred by mutual bitterness and class antagonism.... Critically dependent upon a large urban pool of unskilled, semi-skilled and skilled employees, the industry has reluctantly yielded to union requests.
>
> The auto industry's labor situation has serious locational implications: it is a general principle of locational theory that a less costly center of labor diverts the industrial process from its cheapest transportation point at that moment when labor savings at a new site exceed the additional transportation costs....
>
> The result is a tendency to seek plant sites in areas where labor is cheaper, less troublesome and free from a tradition of hostile labor-management relations. Although industry-wide bargaining insures equality of payment throughout the nation, definite advantages nevertheless accrue to, say, a Southern location rather than one in the mid-West. Workers there will be much more satisfied with wage rates than those in a city with a high living standard. Secondly, no tradition of labor strife exists. Thirdly, management can install labor-saving machinery and automatic equipment more readily in such a branch plant than in an established one. ....[Consequently]. there has been a real decentralization at work in the industry....[34]

In a carefully worded statement, Chairman of Ford, Philip Caldwell seemed to confirm this analysis when he recently "speculated" that "30 years ago auto executives may have deliberately spread their plants around the country to keep their newly unionized workers dispersed as much as possible."[35]

Lastly, as the two-car suburban market grew, the industry increased its factory branches, and company controlled dealerships as a strategy to cap sales. Cities like San Jose, Atlanta, and Arlington, Texas were favored for new plants, while Los Angeles became a West-Coast anchor, second only to Detroit in its extent of employment in the auto industry.

The mobility of auto production was largely confined to the assembly plants. As the assemblies decentralized, so did some of the parts producers, but the majority remained in the Midwest. Parts manufacturers that did open in other locations often produced for both the new car market (original equipment market, or OEM) and the replacement or accessories markets (after-markets). Some locations, like Southern California, developed reputations for innovations in high-speed equipment which spawned regional specialty shops. By the 1960's, the geographical structure of the industry was relatively defined: assemblies were dispersed; suppliers, for the most part, were concentrated in the Midwest, though moderately dispersed reflecting characteristics of regional markets.

The strategies auto makers adopted for making cars worked well for producing quantity, but throughout the 1960's, Detroit was also establishing a reputation for poor workmanship. This came to a head when Ralph Nader in his book, Unsafe at Any Speed, discredited GM's Corvair. In contrast, foreign cars were seen as reliable, safe, and less expensive. Imports picked up sales from 7.6% of the market in 1960 to 14.7% in 1970.[36] When the dollar was allowed to float in 1971, import sales soared, reaching 22.6% in 1979, and the reality of international competition hit home.[37]

From the mid-sixties to the eighties, the auto makers tried several approaches for recovering their profit base. GM entered into different product lines, such as airplane engines, diesel locomotives, navigation systems for guided missiles, and appliances, but sales of these items never became a significant focus. Finally, in 1979, the company sold off its Frigidaire unit. They also accelerated their policy of providing profit-making options onto cars, or as one top auto executive once said, "you put in a clock that costs $10 and charge $30 for it."[38] But most of all, they concentrated on capturing the U.S. market. Though they had

established subsidiaries in Germany, Australia, Britain, and Brazil (in Germany as early as 1929), by 1978, 92% of GM's sales still came from the United States and Canada.[39] Because GM did not integrate their international and domestic businesses until 1978, they abidcated foreign sales to Ford despite strong overseas sales. This was a major decision since overseas sales (Britain, Germany, and Australia) grew 18% between 1956 and 1970 in contrast to domestic (U.S. and Canada) sales which grew 4% from 1956 to 1979.[40] One reason GM chose to concentrate on the U.S. market was because they could sell large cars here. Large cars were preferred over the small cars due to the observation that GM could make "style changes to the more profitable large vehicles for which labor costs might be only 30% higher than those for a compact, while selling prices could differ by 174%".[41] But in their relentless drive to produce cars, they began to saturate the U.S. market. By 1960, there was already one car for every three Americans, so GM was forced to look to replacement sales and sales increases resulting from population growth, which had dropped to 2% per year.[42] Yet their goal was attained. In 1979, GM had captured 46.5% of the U.S. market, imports accounted for 22.6%, Ford 20.3%, Chrysler 9.0%, and American Motors 1.5%.[43]

Ford, on the other hand, beginning as early as 1960, actively concentrated on its overseas production. By 1982, this represented 33% of their sales.[44] That Ford was first in introducing the world car (1976) was consistent with both their committment to produce for international markets, and their original marketing strategy of making simple cars for a common market. The world car was built from interchangable parts arranged to meet the specifications of different countries on an individual basis. Ford's potential for expanding their market was so great it attracted the attention of GM which reluctantly responded to the challenge by 1978.

With the crisis of the 1970's-'80's, competition intensified and the auto makers began to transfer more of their parts production to overseas subsidiaries, or to purchase them from foreign producers, which in turn, had a profound effect on the domestic parts suppliers. Despite a relatively stable market for auto parts, a major survey by Arthur Andersen and Company in 1979 of automotive suppliers projected that 1980's market shares would contract.[45] Foreign producers were expected to make major in-roads into U.S. markets because their lower cost labor, easy access to non-unionized skilled labor, and newer physical capacity could translate into lower cost products. Subsidiary parts producers owned by the auto makers were projected to show less growth through vertical integration, in part because of increased foreign sourcing by the major assemblies. Independent supplier plants, on the other hand, were predicted to become increasingly concentrated.

Two factors will ultimately determine whether the market for parts will move toward either increased foreign sourcing or concentrated domestic production. One is the extent to which parts are made by the major assemblies. Penetration into the parts market reflects the relative strength of an auto maker. During 1980, GM made nearly half of its parts, Ford about 40%, Chrysler approximated 39%, while the estimate for American Motors was 20%.[46] On the supposition that this relationship holds in the future, the next step is to look at the market shares of these firms. By 1990, GM is projected to control approximately 50% of the new car market in the U.S., Ford 18%, Chrysler 5%, and American Motors 2%.[47] With its dominance in the U.S. parts market, GM will be the company to watch for the trend toward greater foreign sourcing. The second consideration is the extent to which demand for a product lies in the original equipment market (and therefore controlled by the assemblies), or aftermarket

sales. Firms unable to successfully switch from the original equipment to the aftermarket will probably drop out. As a result of this shake-down, domestic parts production is expected to become more concentrated.

A follow-up survey conducted two years later by Arthur Andersen and Company reinforced earlier projections. The predictions of the 1981 study were that:

-- U.S. vehicle manufacturers will increase their dependence on suppliers by expanding the share of parts out-sourced by 5 to 15 percentage points, with GM out-sourcing proportionately less than the other U.S. manufacturers.

-- Parts suppliers are expected to absorb some parts operation out-sourced by vehicle manufacturers, becoming more integrated in the process.

-- The panels [of experts] also predict a declining number of parts supplier companies during the 1980's.... This decline, along with increased vertical integration, indicates the 1980's will see a smaller number of larger suppliers in the automotive industry.

-- ...there will continue to be two parts supplier employees for each vehicle manufacturer employee through 1985. [Since vehicle manufacturing employment has been dropping], this would result in a permanent parts supplier employment reduction of about 400,000.[48]

The anticipated trend is clear: those parts made for new cars by subsidiaries of main assemblies are projected for replacement by domestic and foreign producers, while domestic makers of specialty aftermarket and original equipment items are expected to undergo accelerated market concentration.

The projected trend that auto makers will shed some of the parts production allows them to shift market uncertainty onto domestic and foreign suppliers. With this arrangement, assemblies will be in a good position to reconcentrate production in fewer locations, automate more of the assembly process, and institute the Japanese "kanban" system of introducing inventories "just in time," the proposed direction for organizing production in the 1980's. The kanban system was actually "pioneered in Ford's own Rouge Industrial Complex, a mere 3 miles from today's

Ford headquarters in Dearborn, Michigan. Henry Ford had set up the Rouge facility in the 1920's to concentrate all aspects of his auto production, from steel making to final assembly, in a single location."[49] The difference is that Rouge was more vulnerable to labor initiatives than the system now projected with its increased automation and supplier networks.

Recently, corporate affiliations with foreign companies have become a significant avenue for building small cars by U.S. automakers. For example, GM is exploring the option of entering into a joint venture with Toyota at their Fremont, California plant with Toyota introducing innovative methods of production. In this way, GM could control a larger share of the small car market without having to make a committment to it. In order to facilitate this venture, GM and Toyota are now disavowing the UAW's claims on the laborforce associated with the old Fremont GM plant as they simultaneously seek to obtain a free trade zone status for the facility.

Entering the 1980's, it is apparent that the way the assemblers shielded themselves during the '70's distinctly affected the parts producers. Reflecting a legacy of acrimonious relations between capital and labor--especially in "peripheral" locations vis-a-vis the Detroit heartland (e.g., California, Alabama, Delaware)--major manufacturers were responding primarily to nationally organized workers demanding standardized union contracts. In order to avoid (and undermine) this high cost labor, and improve the flow of inventories, auto makers began internationalizing, reconcentrating U.S. production, automating, and sub-contracting more product lines to reduce their variable costs. Suppliers, on the other hand, were less often unionized and operated in a far more variable terrain shaped by the demand for original equipment, the aftermarkets, and local labor markets. The shutdown of assemblers in places like Los Angeles meant the demise

of supplier firms unable to successfully switch over to the aftermarket. For most suppliers, product demand has historically fluctuated with seasonal swings characteristic of the automobile industry. The depressed economy heightened their need for malleable workers. While avoiding high cost union labor was one concern, another was for a flexible laborforce that could be easily laid-off and re-hired. Consequently, in Los Angeles, many of these firms began employing undocumented workers, the most vulnerable laborforce available.

Observations on the Contemporary Economic Restructuring

Since each industry is distinguished by its particular structure, trends in the auto industry are only illustrative of those that may apply elsewhere in the economy. Yet they are significant in their own right if auto alone continues in its present course, and even more so if the potential direction becomes widespread. Given the influence assemblies exert over other manufacturers from suppliers to numerous linked industries the policies assemblers adopt have far reaching implications. Two, and the focus of this research, are the short- and long-term effects on labor.

Although there has been a movement toward international production, the U.S. market is still one of the strongest in the world. Explorations into a joint venture, previously unheard of for GM, is a drastic compromise on the part of a company attempting to retain its market lead. If the deal succeeds, a new corporate entity will be established with GM and Toyota splitting the profits equally. Toyota will be responsible for organizing the workplace (from the use of equipment to the implementation of labor-management relations), while GM will handle the distribution.[50] After 12 years, the new company will reassess future actions.

It is possible that other industries will mimic this arrangement, but replication is unnecessary for this to have a profound impact beyond GM. With a reconcentration of production, implementation of the kanban system, and increased automation, GM can achieve nearly the same labor discipline at other sites with just the hint of more joint ventures, as can other firms that follow suit. Similarly, by transferring some of their manfuacturing process to supplier companies, the suppliers must, in turn, compete with foreign subsidiaries and other foreign producers. Thus, the auto makers will further destabilize the market for parts producers. The prospects are very unsettling. Currently, the three major auto makers maintain between 95 to 98% local content,[51] but this could "double or even triple in the next five years."[52]

These corporate policies coupled with automation will put thousands of workers out of jobs. The potential effect of automation was recently explained by Harley Shaiken in this way:

> ....General Motors will purchase 20,000 robots in the next ten years. The company's experience is that each robot does the work of 1.7 workers in an assembly plant and 2.7 workers in a manufacturing plant, even after accounting for workers who install and maintain the robots. This means that robots alone could displace another 40,000 to 50,000 workers in the 1980's.[53]

The trend toward automation is not exclusive to sophisticated robotics. As one International Labor Organization report noted, there is now a worldwide tendency towards automation even among "low-tech" industries, such as textiles, apparel, shoes, and electronics assembly that had previously been labor intensive.[54] Automation had been characteristic of key auto parts, like engines, for some time. Now it is beginning to show an impact on less important components, like headers.

These developments have led the parts manufacturers to also mechanize when possible, or move to locations with cheap labor. For example, Los Angeles firms have found it advantageous to assemble their products in Mexico while

retaining distribution in the U.S. Firms that can merge (thereby consolidating their financial base), move to Mexico, and automate are on the cutting edge of the market. Clearly, regional ties place a constraint on producers. Those in the Midwest are less mobile, but they have greater access to the original equipment market. Manufacturers in the more distant locations, like Los Angeles, must constantly weigh their potential for expanding into the aftermarket. As some firms find ways to lower their costs by moving or automating, others have lowered their domestic labor costs by employing undocumented workers. The undocumented laborforce provides them with the flexibility to manuveur until a more permanent method of production can be obtained. One danger is that this could evolve into sweatshops. Another is that plants in weak market positions will be forced to change product lines or go out of business. In any case, the direction among the parts suppliers leads to few jobs for U.S. workers, or jobs that are vastly downgraded.

As this scenario suggests, the process of internationalization has come full circle with core and peripheral firms alike forcing U.S. workers to accept employment standards resembling those of other nations. Integral to the industrial transformation in the Southwest has been the employment of undocumented workers. In time, these workers may become redundant. But for now, they remain important for firms adjusting to the change arising from the economic restructuring, as demonstrated by the following case studies.

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CHAPTER 4

ECONOMIC SURVIVAL AMONG AUTOMOBILE PARTS SUPPLIERS

Undocumented Workers as Transitional Labor

Clearly, the extraordinary pressure put on firms throughout the industrial transformation resulted in a demand for ever cheaper and more controllable labor. However, long established workplace conventions (such as the presence of a union that could demand high wages) kept employers from slipping into sweatshop situations. This was not necessarily the case in other nations. In Italy for example, auto production had devolved into homework.[1] Los Angeles auto companies, in contrast, responded to the foreign competition by employing undocumented labor as transitional workers. Transitional here refers to the fact that this labor force performed a valuable function until their employers could capitalize, move overseas, or take other measures to make themselves more competitive. Being "transitional," they are also more yielding to employers' immediate needs. Through selective use of undocumented workers, employers gained an element of control over wage determination and work place practices. This kept costs of production low while they weathered difficult economic conditions.

What is meant by transitional labor is graphically illustrated through case studies. In order to study industrial plants that were representative of primary labor market erosion, eight supplier firms were analyzed at the outset of the market slump, and throughout the duration of the recessionary period. These eight plants were selected among producers of wheels, headers, and batteries because they exhibited different short-term and long-range strategies for lowering their production costs. Wheel manufacturers provided insight into how and why undocumented workers were introduced to a worksite. The headers cases show the

significance of technology in replacing the undocumented workers, and the advantage firms gain by moving their production to foreign sites despite the employment of undocumented workers in the U.S. Batteries further illustrate the constraints regional product markets place on firms, in addition to suggesting the flexibility corporate subsidiaries have in their choice over future directions relative to independent firms.

Methodology

The case study data was assembled from interviews with workers and substantiated by union data and public documents (such as the California Manufacturers' Register). Plants were selected on the basis of : (1) being automobile parts suppliers; (2) having a concentration of undocumented workers or operating in competition with employers of undocumented workers: (3) paying at least the minimum wage; (4) producing for the original equipment (OEM) and aftermarkets; and (5) having a history of participation with organized labor. Union cooperation was important because it was necessary to observe the role of unionization within these plants. Union officials also identified the specific plants they thought employed undocumented persons, as well as the names of knowledgable persons at the workplace, or key informants. The key informants were questioned extensively about their place of work. Non-unionized plants observed in this study were usually those in which a union had waged an unsuccessful campaign, or had been decertified. Consequently, union data could be used to corroborate most of the workers' information. Several unions have organized in the automobile industry and assisted in this study. In order to insure anonymity, names of the union locals, plants, and individuals are withheld.

The non-random sampling technique of identifying firms through union leaders presumably led to biases in the data, however, this must be qualified. Daniel Quinn Mills, among others, has noted that non-unionized firms can be classified as "low-standards employers" or "better standards employers," where unionized firms set the standards.[2] The most significant omission in this study is of low-standards employers. Their exclusion was purposeful because the intent was to study the methods firms employing subordinate primary workers would use to protect themselves in the market. This is not to imply that low-standards firms don't exist among auto-parts producers (one case is cited in the text), however, they do not represent the common type of manufacturer as yet.

Secondly, by interviewing only workers in firms with prior union experience, there may be a bias towards observations of a laborforce that actively interacts with management. Perceptions of workplace relations may have been shaped by the consciously adversarial setting created between the union and management. Where these workers might have felt their status had been violated by some incident, workers in plants with no prior union experience might have seen the same situation as merely a condition to be reckoned with. This is an important distinction because the information sought included history of unionization, company status (subsidiary or independently owned), wages paid to the workers, benefits, workplace relations, and method of production. However, it was also anticipated that access to undocumented workers would have been nearly impossible without an entre, such as that provided by the union leaders, thus the bias was unavoidable.

Since key informants provided the bulk of the information, only as many interviews were obtained as considered necessary to validate the data. In all of the cases, two informants were submitted to 3 to 4 hour interviews, except for

Company E, where only one respondent was used. Consequently, this information reflects the views of fifteen workers who participated in structured interviews, as well as the opinions of union officials, and management. In general, the interviewees reported only on a portion of the workforce, such as their shift, or departments they were acquainted with. Among the case study firms, this represented between 41 and 87 percent of the total employment. As previously mentioned, this information was corroborated with union or other data. Lastly, the workers were identified as citizens, greencard holders, or undocumented. Here, greencard holders refers to permanent resident aliens entitled to engage in employment in the U.S., with the exception of government jobs limited by federal and state statutes. For an expanded discussion of the methodology, see Appendix I. Table 4.1 is a summary of the plants studied. Table 4.2 situates the plants in the context of the Los Angeles industrial base.

Overview of the Case Studies:

The primary focus of the case studies is on the responses by companies to market conditions over time. Given sustained market pressure, firms usually adjust their variable costs of production, particularly labor. If changes in the market are significant, fixed costs are next to be modified, such as investments in capital (equipment) or land (location). Corporate planning may involve a number of short- and long-range policies affecting the allocation of labor, capital, and land.

The specific action taken by a firm is often constrained by labor conditions. Employers regulate their labor costs through the labor process, a concept that includes workplace conventions and practices, the interaction among workers and between workers and their employers, and the way work is organized (including plant floor lay-out, production technology, and locational decisions). Strategies in the labor process include:

Table 4.1

Summary of the Plants

Plants by Category	Size of Firm*	(A) Number of Workers Studied	A as % of Total	(B) Number of Undocumented	B as % of A	(C) Greencard **	C as % of A	(D) Citizens	D as % of A
Wheels A	350	205	59	123	60	71	35	11	5
Wheels B	300	122	41	41	33	12	10	69	57
		327		164		83		80	
Headers C	120	83	69	42	51	32	38	9	11
Headers D	110	74	67	68	92	5	7	1	1
Headers E	53	46	87	41	89	0	0	5	11
		203		151		37		15	
Batteries F	150	113	75	0	0	6	4	107	96
Batteries G	270	185	69	0	0	99	54	86	47
Batteries H	150	98	67	31	32	57	58	10	10
		398		31		162		203	
TOTAL:		926		346		282		298	

*---actual size (employment).

**--foreign born non-citizens holding work permits.

- o the introduction of undocumented workers to weaken union strength and keep wages low;
- o stratification of workers by race and citizenship;
- o automation; and the
- o relocation of production.

Another constraint in a firm's decision to lower costs is the availability of finance capital, which, in part, is a function of the corporate structure. Subsidiaries have the wealth of their parent companies to draw on, while independently owned firms rely on a smaller and generally more volatile, undependable resource base. Independent companies can sometimes overcome this limitation by becoming acquired or through mergers.

The eight companies analyzed illustrate various short-term and long-run market adjustment strategies. Their responses to the market reflected both their labor situation and their corporate structure. (A profile of these responses is summarized in Table 4.3.)

Table 4.2*

Los Angeles County Industrial Context

	SIC	Number of Plants in Study	Plant Size	Number of Employees Studied	Number of Plants in L.A.	Number of Employees in L.A.
Storage batteries	3691	3	570	396	16	1,268
Motor vehicle parts**	3714	5	933	530	208	10,000-24,999
TOTAL		8		926		

SIC --refers to Standard Industrial Code

* --Data based on March 1979 County Business Patterns.

** --Includes nearly all types and parts producers.

Table 4.3

Responses to the Market by the Case Study Firms (1979-1981)

Type	Company	Union	Ownership	Responses
Wheels	A	Yes	Subsidiary, to non-auto	Employed primarily undocumented workers
Wheels	B	No	Subsidiary, to non-auto	Paid high wages ostensibly to prevent unionization
Headers	C	Yes	Independent	Automated, merged, moved to Mexico
Headers	D	No	Subsidiary, to non-auto	Closed in L.A., moved to nearby county
Headers	E	Yes	Independent	Remained in L.A., retained labor intensive production
Batteries	F	Yes	Subsidiary, to auto-related	Automated
Batteries	G	Yes	Subsidiary, to auto-related	Closed in L.A.,expanded Midwest facilities
Batteries	H	Yes	Independent	Employed primarily undocumented workers

Since labor was usually the initial factor of production affected by the companies policies, this will be discussed first. The main points of inquiry are how labor contributed to the cost of production, the reaction by firms to unionization, and the relationship between unions and undocumented workers. The second area of analysis is the role of technology in lowering variable costs. The last section will concentrate on location as a fixed cost variable. These sections will draw on the experience of all the firms, but will be viewed in light of one of the product lines. The analytical sequence will be in the order of wheels, headers, and batteries. Regarding the cost of labor, all of the eight firms (except Companies F

and G) employed undocumented workers. Each of these companies exhibited clear and parallel tendencies in their hiring, promotion, and employment policies. The wheels firms provide special insight into the situation.

At the time of this study, approximately twenty-two wheel manufacturers were identified in the Los Angeles region. Of these, two major manufacturers presenting interesting contrasts were analyzed. Though similar in size, Company A had a workforce of 60% undocumented, whereas Company B was composed of nearly 60% citizen workers. Both were subsidiaries of major corporations. Company A was unionized by a large international union; Company B was non-unionized, yet it paid over $2.00 per hour more on average. Company A made steel and cast wheels while Company B made only cast wheels. The manufacture of steel wheels is less dangerous than cast wheels since the hazardous part of production is usually relegated to foreign producers. In contrast to steel wheels where production itself has become internationalized, cast wheel producers commonly use internationalized labor (i.e., undocumented) in the manufacture of their product in the U.S.

Unionization was clearly a very important contending factor for employers. With a union, employers must constantly enter into collective bargaining over wage rates, job classifications, benefits, and other considerations that make the costs associated with labor quasi-fixed. There are several ways employers can confront this situation. One is to shut-down the plant at the outset of unionization and relocate. This was the case in Company D (headers) where the parent holder (disassociated with the auto industry) was interested in the firm only as long as it returned a healthy profit. Here, the price of a union didn't fit into their plans. Another tactic is to "buy-off" workers with decent wages, which occurred in Company B. According to the workers, the higher wages were offered as a means

to prevent unionization. If unionization had been successful, a company could encourage the employment of undocumented workers as a way of undermining the union's strength. Company A sheds further light on this strategy.

The role of undocumented workers was key in Company A's effective defensive posture towards their union. Significantly, undocumented workers became prominent in the plant only after it was unionized (1971). Since one of the management's prerogatives was to retain control over hiring, this could be selective, favoring family members and undocumented workers. A worker's citizenship status was deduced from his speech (use of Spanish) and references. Often jobs went to friends or family members of the undocumented production workers. In time, the union found itself with workers whose rights were difficult to protect. This was illustrated by the union's reluctance to challenge the company decision to fire an undocumented worker over a minor issue. Similarly, workers allege that the company will sometimes not pay the full rate for overtime work as a result of the union's deteriorating power and influence. Consequently, the workers are dissatisfied with their union, and the union is frustrated by its weakened adversarial role.

Although unionization seeks to standardize wages and workplace practices, a union's presence tends to erode once the employer begins to take advantage of the undocumented workforce. One clear violation of union ethics was promotion of the undocumented workers based on favoritism or other non-tenure or skill-related reasons. Through continual disregard for union policies, employers could effectively dismiss the union as a viable force for contention. The observations of a worker in Company H (batteries) convey much about this problem: "To be promoted, you have to be on good terms with the foreman or supervisor, participate in the soccer or baseball team, or at least be a cheerleader."

Once undocumented workers entered the workplace, the employers could stratify workers according to both their citizenship and race. In Company C (headers), stratification led to a significant element of control over the workforce since a perceived difference was then created among the workers. In the words of one worker: "The employer, I suspect, is racist since he never talks to any of us and looks at us like we are animals. He only talks to supervisors who are all white and they are the ones in charge of communicating orders to La Raza." The tendency towards stratification surfaced frequently and was distinguished by higher average hourly wages paid to citizen workers and progressively lower wages for green card holders and undocumented workers. There was also a close relationship between the workers' citizenship status and average years on the job. The lower wages reflect the relative newness of the undocumented workers to the jobs. Since they were employed more recently than citizens workers, they were assigned lower skilled entry level positions. Consequently, lower wages for undocumented workers were the function of both job tenure (in part a reflection of human capital attributes), and a management tactic to impose a system of hierarchical control among the workers. Table 4.4 compares average wages and time on the job for the eight companies by citizenship.

The headers cases further illustrate the inability of undocumented workers to guarantee a market advantage for firms over the long term. Headers are exhaust manifolds for new high performance cars and used passenger cars, pick-ups, and recreational vehicles. They increase the efficiency and horsepower of engines by recycling residual exhaust fumes. During the late 1970's, approximately sixteen manufacturers operated in the Los Angeles region. In the period of a few years, two companies moved to Mexico, and at least one went out of business. This study looked at one company that moved, one that remained, and one that closed. These

Table 4.4

Average Hourly Wage and Average Years on the Job by Citizenship Status for the Case Study Firms

	Wheels		Headers			Batteries			
	A	B	C	D	E	F	G	H	TOTAL
Citizen (#)	11	69	9	1	5	107	86	10	298
Pay ($)	$5.82	6.73	7.05	4.40	5.35	9.07	11.38	5.20	$8.81
Time (Years)	4.62	3.88	7.33	.50	11.00	9.70	6.47	16.35	7.38
Greencard	71	12	32	5	-	6	99	57	282
Pay	$4.39	6.47	6.74	5.10	-	9.75	11.42	5.15	$7.49
Time	2.74	4.56	4.12	4.80	-	13.17	5.95	5.77	4.97
Undocumented	123	41	42	68	41	-	-	31	346
Pay	$4.15	6.19	6.01	3.57	3.82	-	-	4.92	$4.99
Time	2.24	4.80	2.06	2.08	2.86	-	-	3.17	2.65
TOTAL (#)	205	122	83	74	46	113	185	98	926
Pay	$4.32	6.89	6.40	3.69	4.00	9.19	11.40	5.09	$6.87
Time	2.54	4.26	3.43	2.24	3.75	9.88	6.19	6.03	4.88

three companies were similar in several respects: they were relatively small; they operated in the same labor market; and their labor demands were nearly identifical, they all relied on undocumented workers.

The headers cases were instructive of several points. When the technology lends itself, a firm can adopt combined strategies of automation, merger, and flight to other countries. In Company C, the production work was increasingly performed by numerically controlled machines. In the process, the company trained some of the benders as computer programmers, who were also undocumented. Fewer production workers were then needed with the new operation, and those necessary were reduced to performing simple tasks. However, the company was unable to obtain the economic benefit they expected since the union was strong enough to maintain the redundant workers and keep the wage level for the now de-skilled jobs at the previous skilled rates. As a counter-measure, the company consolidated its financial resources by merging with another Los Angeles company, and moving to Mexico where wages were significantly lower.

With the move, wages dropped to approximately $1.60 per hour compared to $6.50 in L.A. In Mexico, they no longer had to pay workmens' compensation (which had previously come to 7% of the wage bill), social security, or state disability. Rental space came to 9¢ per square foot (or $50 per month) as opposed to the 26¢ per square foot they paid in the U.S. The plant in Mexico operates in a special industrial zone from which they export duty-free to Canada. Imports to the U.S. are taxed only for the value added to the header in the manufacturing process which consists of the cost of low-wage labor. When they moved, two pipe suppliers moved with them. Company C took a new name after it merged but retained the Los Angeles plant as the corporate headquarters and distributor to western states.

Many of the existing Los Angeles headers producers have remained labor intensive and employ primarily undocumented workers. Indicative of the extremely competitive climate, one company has been drastically underpricing its product. If a price war is started, Company C can easily underbid all the other manufacturers and emerge as one of the few, if not the sole, producer of headers. Competitors which can not adopt similar measures taken by Company C (automation, merger and moving), could easily be forced to evolve into sweatshops in order to remain viable. Though not common among auto parts producers, sweatshops (violators of minimum wage and labor standards legislation) has been observed in the production of steel wheels by a local firm that competes primarily with foreign manufacturers. According to one plant manager, the company probably saves very little per rim by using sweatshop labor as opposed to buying them from Mexico, but even this small savings creates an incremental advantage in the market.

While the headers case makes a clear statement about locational advantage, batteries show how the ability to use international sites or internationalized labor can be constrained by regional product markets. Three battery companies out of a total of fourteen in Los Angeles were observed. Though all made automotive batteries, the products from two companies were of higher quality than of the third and appealed to different markets. These two manufacturers produced for the new car market, and for them, the loss of major auto assemblies in Los Angeles was particularly devastating. After suffering a major loss of sales, one of the firms decided to dismiss the West Coast altogether and reconcentrated its production in the Midwest. The other firm refocused its sales towards the high quality aftermarket since in the west aftermarkets have been more profitable. The manufacturer of the lower quality batteries sells to government agencies that seek the lowest bid, and to jobbers who resell the product under a brand name.

The distinction between the two types of battery manufacturers was reflected in their method of production and use of labor. The manufacture of batteries involves the use of dangerous chemicals. In order to minimize potential chemical hazards and reduce the number of workers involved in the production, some firms have mechanized several of the steps. Because handling of this equipment requires semi-skilled labor, workers in the more automated plants tend to be paid higher wages than in the labor intensive firms where most of the work is done by hand. Furthermore, the products from the more automated firms are of a better quality. On the other hand, batteries made by the more labor intensive, hazardous method are of poorer quality, but they are also much lower priced.

Reflecting the different methods of production, the differences in labor demand among the battery makers were striking. The two manufacturers using capital intensive methods of production drew from the resident and greencard labor pool. On average, the wages paid per hour in these plants were double those paid in the labor intensive firm. In contrast, the labor intensive company resembled the wheels and headers employers of undocumented workers where wages were stratified by citizenship. These variations existed despite the fact that all three firms had contracts with the same labor union. Thus, unionization was less important than the strength and location of the product market, and the method of production in determining the special demand for labor. It is worth noting that the first two firms were also subsidiaries of larger corporations, while the third was an independent manufacturer, once again repeating a tendency for corporate structure to be related to a firm's position in both product and labor markets.

Several key points emerged from the case eight studies. Throughout the economic recession, the drive to control production costs was consistent across all

the firms. Some relied primarily on lower paid, easily controlled labor to achieve this. The most common pattern was for employers to give preference to undocumented new hires, be selective in promotions, and stratify the workers by citizenship and race. Where the technology lent itself, automating led to even lower costs, as did locational decisions, but these were often constrained by the corporate strength of the firm. Locally bound and independently owned firms had less opportunity to take advantage of these other steps that required a capital outlay, and therefore, they seemed to have a slightly higher propensity to employ undocumented workers than did subsidiaries. Although this reflected one trend, some parent companies also found it in keeping with corporate policy to extract as high a profit as possible with a minimum of effort, so employing undocumented workers was a compatible policy for them as well. These observations will guide the reader through the case studies. The cases that follow proceed in the order of wheels, headers and batteries. In each case, the general market for the product will be highlighted first, followed by the method of production. This will serve as contextual information to the plant by plant analysis.

Case Study I--Wheels

The Market for Wheels

Splashy mag wheels speeding down an open road make a strong advertising statement. They appeal to aspiring drivers of finely tuned, fully equipped cars, or in the words of one sportswriter, the "performance cult." Wheels, along with oversized tires, customized steering, and camshafts convey a racy image businessmen package to enhance the selling of new cars and expensive acessories. These products are claimed to be counter-recessionary since during hard times the

need to display such symbols of personal efficacy heightens. Parts like wheels confer an individualized appearance to otherwise standard or medium priced cars, and are an object of affection and extension of self for many drivers. As one manufacturer of hot-rod equipment noted, "the average American has a love affair going with his automobile. In a manner of speaking, we make the valentines."[3]

Merchandisers have also recognized the strong market for speed items, and a number of promoters from speciality magazines to accessory retailers have developed around these lines. One commentator on the souped-up equipment market noted that during 1970:

> Sales of such items have taken off in drag race fashion during the past decade, at least partly because of the merchandising efforts of auto supply chains, discount houses and the new "speed houses" that are sprouting all over the Southwest, catering to the black-leather-jacket-and goggles set. Eric Grant, S.E.M.A. [Specialty Equipment Manufacturers Association] managing director, estimates that total volume will reach $1.2 billion this year, up from about $1 billion last year. Indicative of the industry's explosive growth, he says that in 1960 the total probably wasn't much over $100 million.[4]

By the 1980's sales remained strong largely due to the continued salesability of "muscle cars." At one time, these cars included Ford's Mach I Mustang, GM's GTO, and the Plymouth Road Runner, and more recently GM's Camaro and Firebird. Other accessory oriented models doing well during the '80's recession were higher priced automobiles such as Cadillacs, BMW's, Porsches, Lincolns, Buicks, and Volvos.[5]

As opposed to parts made by both subsidiaries to assemblies and subcontracted producers (e.g., batteries), wheels are supplied entirely by firms that are independent of the major auto makers. Producers for the original equipment wheel market might have high volume orders from major auto makers, but the assemblies control the price of products through year-to-year agreements stipulating that only increased costs of materials, labor and overhead can be passed on to the parts

producer during the contract period. In contrast, the custom and replacement wheel after market are more variable within any year, but prices for the products are unconstrained.

The importance of custom steel and cast wheels to the new car market is remininscent of a concept social commentator Emma Rothschild calls "Sloanism, or GM's variety marketing." As Rothschild writes, "former GM president Alfred Sloan's idea for upgrading consumer preferences was that automobiles should change each year and should each year become more expensive (at least relative to the cost of production)."[6] So the design strategy of the auto makers was one of making style changes to the more profitable large vehicles. Detailing like stereos, vinyl roof coverings, fancy paint and wheels became key for new car sales, especially as the market for cars became progressively more saturated. But with the switch to small "basic cars" caused by costly gasoline, demand for accessories such as custom wheels heightened. The observation of marketing consultant Edward L. Kaufman was that:

> One of the motivations for buying high styled steel wheels in recent years has been downsizing. The popular priced domestic and foreign cars produced in recent years are frequently described as "plain little boxes." As a result, a lot of people who never had any fantasies about being "Indy" drivers have found it worthwhile to buy a set of wheels for their VW Rabbits or little GM, Ford, or Chrysler sub-compacts.[8]

Despite the continued demand for wheels, wheel manufacturers operate in a highly competitive terrain that has led to a perceived rise of bankruptcies. The climate is one of firms trying to undercut each other by lowering their costs of production. These costs vary with the method of production of which two are prominent corresponding with the manufacture of cast versus steel wheels.

Wheel Production

For many years, wheels were made from steel strips rolled and riveted into

rims. Spiders, the center part that bolts onto the axle, were spot- or arch-welded to the rim. Together rims and spiders combined to form steel wheels and were standard equipment on a new car. Steel wheels are still popular, but increasingly, cast aluminum or magnesium wheels are capturing consumers' preferences. Though more expensive than steel, cast wheels are easily styled into attractive configurations. Plus they are considerably lighter in weight (15 lbs. each as opposed to 20 or 25 lbs. for steel wheels).

The steps to making a steel when are as follows: (1) first, sheets of metal are cut into strips; (2) the strips are rolled into a circle; (3) each circle is welded into a rim; (4) excess metal is cut from the weld; (5) the rim is trimmed and ground; (6) and form-pressed to give it a flange; (7) next the rims are shaped on rim rollers; (8) expended or stretched to the proper size; (9) and polished, chromed, and repolished; and (10) finally, the spider is arch- or spot-welded to the rim.

Cast wheels are more labor intensive, require less skilled labor, and involve a more dangerous process. For these reasons, one labor organizer said that he expected undocumented persons might be employed to do casting. The production of cast wheels occurs in the following ways: (1) the metal is melted in a foundry; (2) poured into molds and subjected to hydraulic ovens (called heat treat); (3) next, the cast wheel is taken to the machine department where, with a lathe, excess metal is cut off and; (4) using a drill press, the wheel is perforated at the points bolts should go; (5) then the wheel is polished and chromed, or polished and painted.

The most modern method of cast wheel production is fairly sophisticated and was explained in detail accordingly:

> [The] process begins with ingots of aluminum and an induction furnace.
>
> "An induction furnace is used because it will raise the temperature of the aluminum to its melting point (710 C), much faster than the more

conventional gas furnace... Fast melting through induction is important, not just to minimize production time but to maximize the quality of the wheel..."

The molten alloy is then poured from the induction furnace into a large ladel and from there into holding tanks at the base of each molding machine.

"At this point the aluminum alloy is ready to be used in the molds... Filling the holding tanks and removing the wheels are the only non-automated areas of producing the casting."

Mold sections, which are made from tooled steel with a coating of refractory paint, are brought together to form one mold directly over the alloy....After cooling, which takes just over two minutes, the wheel is removed from the machine.... Now the center hole is bored. From this point on, the center hole will be used as a reference when working on the wheel....

The wheels then undergo a solution heat treatment: "For eight hours, each wheel is subjected to a temperature of 540 C.... This temperature is sufficiently beneath the alloy's melting point that the wheel maintains its shape. However, at such a high temperature, the molecular structure of the alloy is allowed to change its position, almost as if it were a liquid...."

To temper the metal, the wheels are aged at 140 C for four hours..."Aging increases the hardness of the metal..." At this point, the outside rim and the back of the wheel are machined. With computerized precision, automatic machining takes about two minutes.

An intensive six-stage wash procedure follows..."After coming out of the wash...the wheel goes through a drying over at about 120 C. When it's dry, the wheel is sprayed with an acrylic color coating and then baked in an oven for 20 minutes at 205 C."

At this stage the entire face of the wheel has a coating of paint on it.... Now the wheels are put back through the six-stage wash.... The final step is the application of a protective clear coating.

The wheels are packaged by hand to minimize the chance of damage, and from there they are ready for the customer's car.[9]

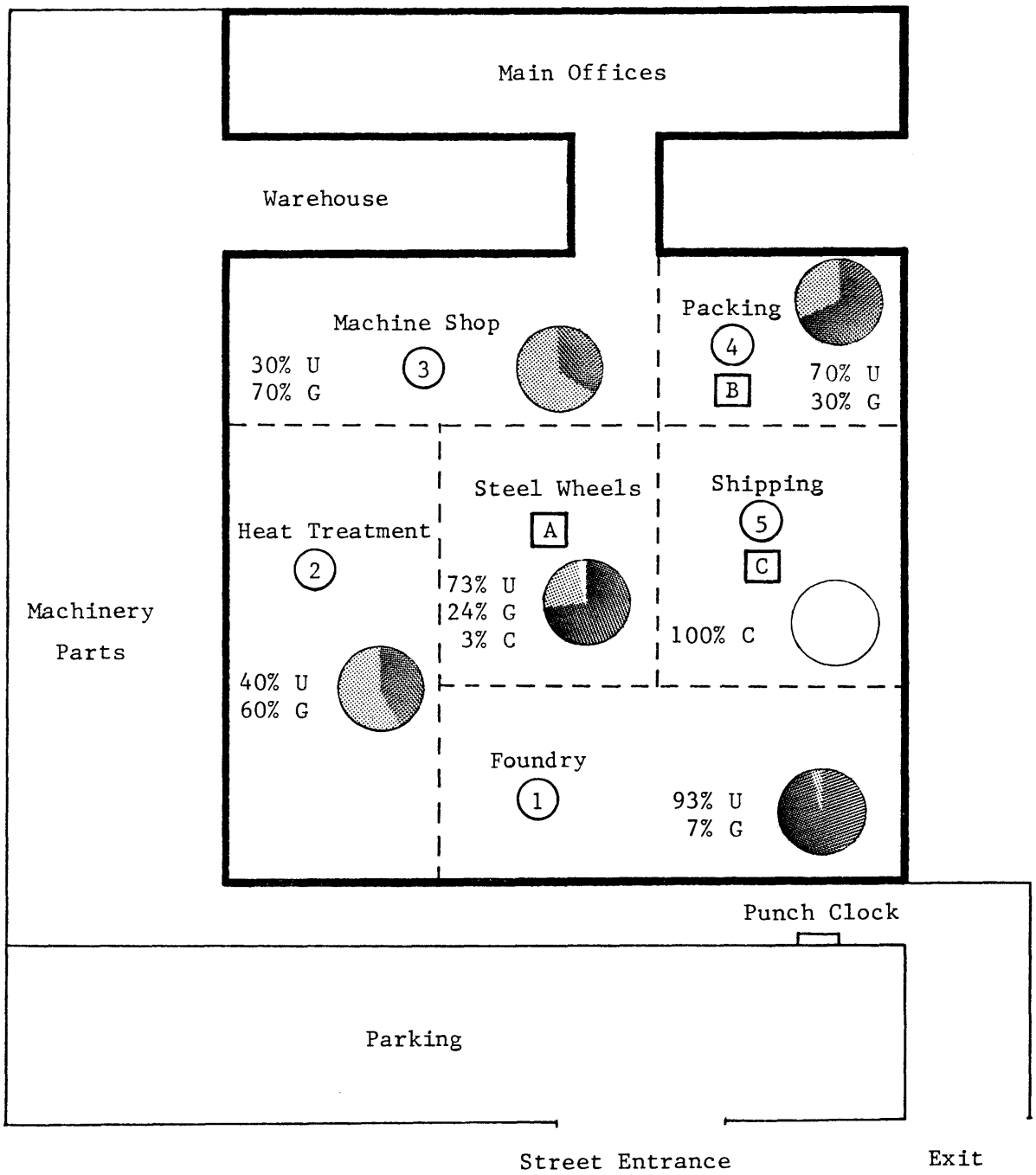
Three broad categories of wheels are now made: standard equipment steel wheels; custom steel wheels; and custom cast aluminum and magnesium wheels. Standard equipment wheels usually consist of black rims and simple spiders covered by a hub cap. Custom steel wheels are generally chromed and have ornate spiders. Cast wheels have flexible designs limited only by engineering feasibility and structural integrity. Illustration 4.1 shows examples of the variety in wheel design.

Illustration 4.1
Examples of Wheel Designs

Plan 4.A

A Basic Floor Plan in the Manufacture of Wheels

(broken lines indicate general work areas, not rooms)



Today, only a few U.S. companies continue to make steel rims. The chroming and polishing of rims create a fine metal dust and involves the handling of hazardous material that has made the production processes the object of extensive regulation. Rather than meet health and safety standards, U.S. companies either buy rims from firms in Mexico, Brazil, or Peru, or open subsidiaries in Mexico. The remaining U.S. companies tend to make standard equipment steel wheels which require less noxious production methods. Therefore, most steel wheel firms either buy already chromed rims, or make undecorated rims and weld simple spiders to them.

Although cast wheels are considerably more expensive than steel wheels (they can range from $80 to $700 each as opposed to approximately $50 for steel), one worker commented that the quality is suspect and government inspection of production standards lax. Sometimes a plant will produce only one kind of wheel, but often companies will make both types and for both the original equipment and aftermarkets.

At the time of this study, approximately twenty-two wheel manufacturers were identified in the Los Angeles region. Among these, perhaps five were major original equipment producers, and two were major standard equipment makers. The remainder were small specialty producers. Compared to the rest of the nation, California housed approximately 81% of the wheel manufacturers, with Los Angeles figuring at nearly 68%.[10] This study analyzed two major custom manufacturers.

As previously noted, the two companies studied presented interesting contrasts. Though similar in size, Company A had a work force of 60% undocumented, whereas Company B had nearly 60% resident workers. Company A made both steel and cast wheels while Company B made only cast wheels. Both

were subsidiaries of major corporations. Company A was unionized by a large international union while Company B was non-unionized. Yet, Company B paid over $2.00 per hour more in their average hourly wage. Tables 4.5 and 4.6 summarize this information.

The following company profiles clarify the specific purpose of undocumented workers within the two wheel companies.

Company A Profile

Company A is a subsidiary of a corporation that manufactures a number of different auto and non-auto products. This plant began operating at the current site in 1977 although it had previously located elsewhere in Los Angeles under a different name. The company has been unionized since 1971 by a strong international union but relations had been poor from the start. At the time of the election several pro-union workers were fired. Since then, there have been continual battles between the union and management. In several significant ways, it appears that the union is steadily losing ground.

Prior to unionization, the workers were paid minimum wage and a few benefits (life insurance and pensions). Promotions and job security were based on a workers' influence--a system that favored old timers, people related to the managers, and company supporters. After unionization, wages increased somewhat, but nothing else improved. In fact, it was the perception of one worker that "benefits have been decreasing gradually since the union."

When the company continued to abuse the conditons of the contract, the workers initiated a strike. The strike took place in 1978 with the workers demanding higher wages, more benefits, and better working conditions. Many of the strikers were undocumented, but then so were many of the strikebreakers.

Table 4.5

Citizenship Status of the Workers in the Wheels Case Studies (1981)

Firm	Size of Firm/1	Number of Workers Studied/2	2 as % of 1	% undocumented/2	% greencard/2	% citizens/2
A	350	205	59	60	35	5
B	300	122	41	33	10	57

Table 4.6

Average Pay Per Hour Based on Citizenship Status for Wheel Companies (1981)

	Citizen		Greencard		Undocumented		Total	
Firm	#*	Pay**	#	Pay	#	Pay	#	Pay
A	11	$5.82	72	$4.39	122	$4.15	205	$4.39
B	69	$6.73	12	$6.47	41	$6.19	122	$6.89

* --number studied

**--average pay per hour

After seven weeks, the union was defeated and wages remained low. During the strike, the company claimed to have lost customers and was contemplating a move to Orange County, in part, to get away from the union. Instead, they diluted the union's strength by introducing undocumented workers and stratifying the workforce as discussed in the overview.

Worker stratification is demonstrated graphically in Plan 4.A which is a schematic floor plan in the manufacture of wheels. In this floor plan the following processes are shown: steel wheels--(A) machining, welding, chroming, painting; (B) packing; (C) shipping; castwheels--(1) foundry; (2) heat treat; (3) machine shop; (4) painting and packing; and (5) shipping. Table 4.7 is keyed to Floor Plan 4.A and illustrates in detail the distribution of the workers according to occupation, race, citizenship, time on the job, and wages. Within the plant, the undocumented are concentrated in either the dangerous jobs (e.g., foundry) or the more unskilled positions (e.g., packers).

Compared to many smaller wheel manufacturers, Company A appears to be surviving this economic crisis. In 1981, gross sales were reported to be $3 million, reflecting a contract with a major auto maker. In addition to hiring undocumented workers, another corporate strategy for maintaining control over costs has been to diversify its manufacture of wheels within the OEM and aftermarkets, and among steel and cast wheels. Cast wheels appeal to the image-conscious market, while steel wheels are sold as standard equipment or as more modest custom wheels. The advantages of the steel wheels are that they are cheaper, require less material, and are a faster operation.

Although Company A does not engage in this practice, another Los Angeles company has found yet another way to lower its costs in making steel wheels. This plant employs undocumented workers to polish rims at night in a dingy sweatshop

Table 4.7

Company A - Production Worker Profile (all male)

Wheels

#	Department	Occupation	Code*	Number of Workers	Sub-Group Number	Race **	Citi-zenship ***	Average Time on the job (Yrs.)	Average Hourly Pay ($)
(1)	Foundry	Furnacemen	622	60	1	L	G	2.58	6.00
					3	L	G	2.58	4.17
					56	L	U	2.58	4.17
(2)	Heat Treat	Heat Treaters	446	10	6	L	G	4	4.17
					4	L	U	1	4.17
(3)	Machine Shop	Machine Operators	692	66	24	L	G	5	4.47
					10	L	U	5	4.47
					22	L	G	.5	4.47
					10	L	U	.5	4.47
[A]	Steel Wheel	Welders	680	3	1	A	C	.17	4.00
					2	L	G	4	5.60
		Drill Press Operators	650	3	3	L	G	3	5.00
		Precision Machine Operators	653	3	1	L	G	3	5.00
					2	L	U	3	5.00
		Painters	644	3	1	L	U	.42	4.50
					1	L	U	1.5	4.50
					1	L	U	5	4.50

Table 4.7 (continuation)

#	Department	Occupation	Code*	Number of Workers	Sub-Group Number	Race **	Citi-zenship ***	Average Time on the Job (Yrs.)	Average Hourly Pay ($)
		Forklift Operators	706	3	1	L	G	2	4.00
					2	L	U	2	4.00
		Misc. Laborers	780	11	2	L	U	.42	3.75
					2	L	U	2	3.75
					3	L	U	5	3.75
					2	L	U	1	3.75
					2	L	U	.5	3.75
		Inspectors	610	3	3	L	G	3	4.80
(4)	Packing	Packers	643	30	9	L	G	1.17	3.70
[B]					21	L	U	1.17	3.70
(5)	Maintenance	Electricians	430	10	2	A	C	1	6.00
[C]		Misc. Mechanics & Repairmen	492		4	A	C	11	6.00
		Deliverymen	705		4	A	C	1.17	6.00
	TOTAL			205					$4.30

\# Department numbers are keyed to the floor plan

* 1970 Census Occupational Codes

** A = Anglo; L = Latino

*** C = Citizens; G = Greencard; U = Undocumented

factory. The workers are not given goggles, face masks or other protective equipment, so they must work dressed in layers of old clothes and with rags tied around their faces and hands. Against their palms they hold metal so they can hear if the rapidly revolving rim they steady with their hands as it is being polished has worn through the fabric. A metal dust chokes the air and leaves a film on the workers bodies, even through their clothes. The pollution goes undetected as it filters into the night air since health and safety regulators rarely scout out violations at 2 a.m. As the rims are completed, the workers stamp "Made in Brazil." Acording to one plant manager, this company saves a few dollars per rim.

With sweatshops and foreign producers as competitors, Company A is forced to have a "hard-nosed" attitude towards production costs. As yet, they are not a sweatshop. However, neither are they nearly as fortunate as Company B which is part of a vast and wealthy conglomerate.

Company B Profile

Company B began production in the middle of the 1974 recession. In 1978, the current owner, a large diversified conglomerate, bought the plant. The plant produces only cast wheels, but it sells to numerous domestic and foreign automakers, so product demand has been stable. Nationwide, this company is a leader in the market.

From the beginning (1974), there had been undocumented workers. They were essentially an inheritance passed on to the company. These workers are fairly well dispersed throughout the plant, and they were paid quite well.

The company seemed less concerned with lowering production costs by lowering wages than with simply keeping out unionization. After three years of campaigning, in early 1982 a strong international union attempted an organizing drive. When the management realized that this was taking place, they became

friendly with the workers. In talking to the workers, they learned that wages were an issue so pay was increased by 50¢ per hour. Benefits are extremely good and overtime generous. Consequently, for many workers, unionization didn't seem worth while.

The workers inclined towards a union wanted more control over decisions that affected workplace relations. But many workers, especially those that had received favorable treatment, didn't value a union very highly. Significantly, neither did many of the undocumented who were afraid that the union would ask them for their immigration papers. It has since become company policy to require immigration documents and physical examinations of new hires. Consequently the workers who were with the plant before the change in ownership (1981) had a vested interest in minimizing questions about their identity. Together, the undocumented and the workers who identified with the company successfully blocked the union effort.

Company B shows an interesting side to the industrial picture. It appears that this company did not know that some of their workers were undocumented and were actually making an effort to keep these workers from their establishment, but inadvertantly, they now have a workplace ally. The workers' loyalty reflects their gratitude for a decent job. Jointly, the workers and the management acted to limit the workers' power. That the employer can pay moderate wages is a function of the strong demand for their product and of the resources it can draw from the parent firm (research, financing, spill-over contracts). These qualities are extremely important for the employer to be indifferent to the downward pressure on wages that accompanies the availability of undocumented workers.

Case Study II -- Headers

The Market for Headers

Headers are exhaust manifolds installed directly onto the engine block for the purpose of drawing out residual exhaust fumes. In California, the Air Resources Board must license any auto part, factory system, or the like that could change the air quality through emissions. While headers make an engine both more fuel efficient and more powerful, they also change emissions just enough to create licensing difficulties in California. This has not applied to any other state. Consequently, the market for headers has been constrained in California. Other than this regional obstacle, the market for headers has been expanding slightly reflecting car owners increasing concern with fuel efficiency.

Manufacturers of headers make a profit on volume sales because per unit returns are relatively low. Twenty years ago, a header normally sold for $115 and $135. Today, with the introduction of automated cutting, bending and welding, the price has dropped to an average of $75 to $90, with some of the more popular lines being even less. Warehouses and retailers treat this as a "lead-on" item attracting buyers into the business. They assign a low mark-up to headers, and hope for a high turnover. Manufacturers might realize at 10% profit on each product before taxes, or 3 to 5% after taxes. Per unit, profits can be as low as $2.00 so they, too, depend on a high volume of sales. Though the market for headers is favorable, much of that is credited to producers going out of business. Given a slightly expanding product market combined with a tendency toward concentration among the manufacturers, a few producers have realized a fairly decent return.

The Production of Headers

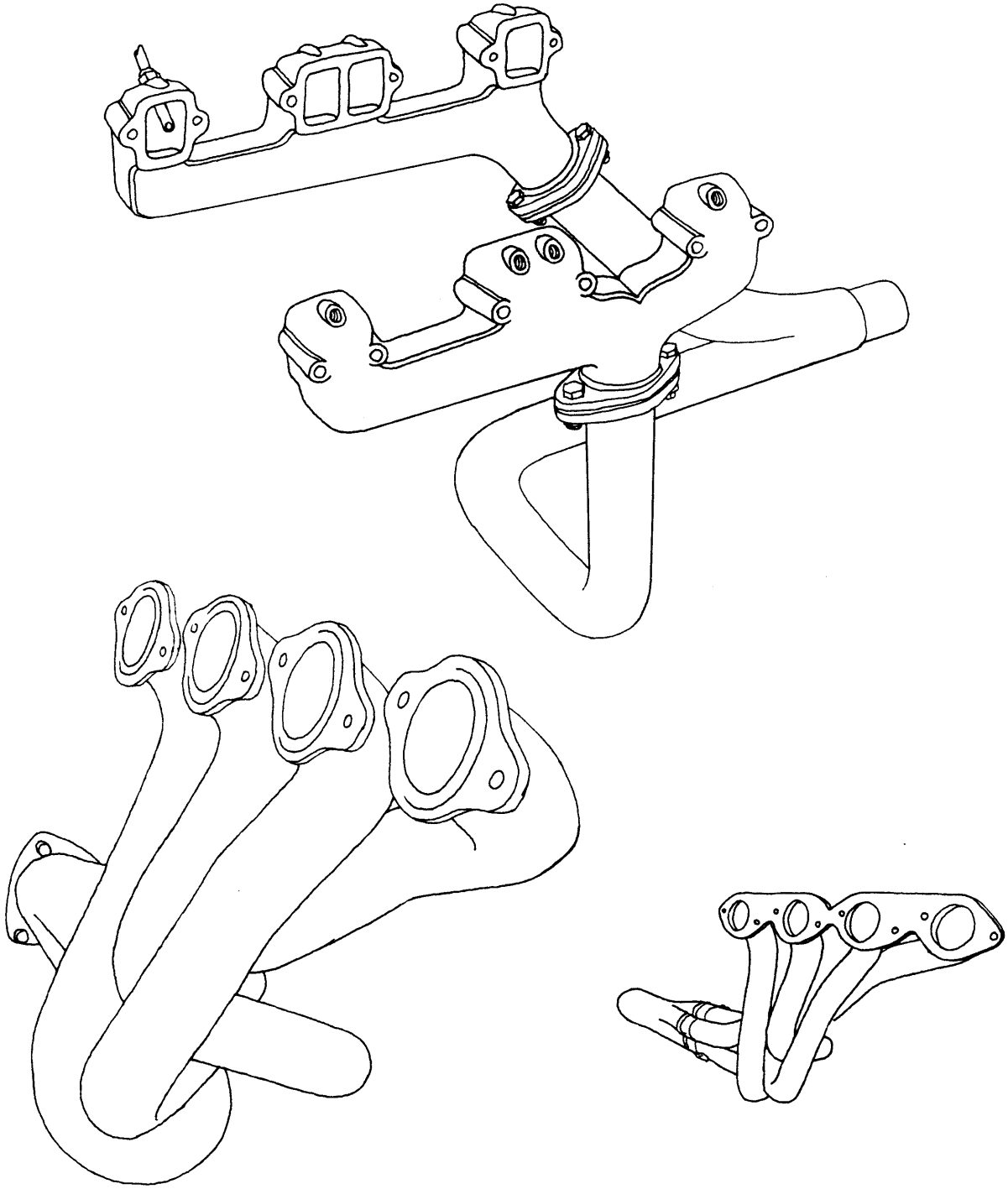
Headers are a relatively simple auto part, generally 20 feet long, consisting of three of four steel tubes approximately 2 inches in diameter, attached from the exhaust pipe to the engine. At the exhaust pipe, they are welded together, but separate and fan out where they meet the engine. Header production consists of cutting and bending steel tubes to conform with the shape of the underbodies of different car models, and the welding together of these tubes. Because car models change every year, a manufacturer must constantly adjust bending and welding patterns. This creates a seasonal aspect to the work. Part of the year, generally from March through June, there is overtime to meet new orders, but from October through December, demand decreases.

In the last ten years, production has become increasingly automated. Through automation, the need for labor is reduced, and though equipment may initially be expensive, over the long-run, production costs are lowered. It is easy to understand how automation has been introduced by looking at the method of production. In this study, all three companies used the same basic steps: (1) first the tubes are cut to the appropriate length; (2) then they are bent according to the configuration of the engine and chassis (underbody); (3) the ends of the tubes are "swaged" or forced into squares or other shapes in accordance to engine or exhaust pipe openings; (4) the tubes are next welded together and a plate is attached for stability where they anchor against the engine block; (5) the ends are ground until even in length; (6) holes are drilled into the plate where it will be connected to the engine; (7) the header is inspected; (8) then painted; (9) and finally, packaged and sealed. The following illustration shows header configurations.

Despite the regulation limitations, producers have located where they have access to a reasonable share of the market while maintaining competitive

Illustration 4.2

Examples of Headers



production costs. Los Angeles, the largest city in the state with the highest concentration of sports cars in the country, has both a well established system for distribution (forward linkages) coupled with a diversified base of suppliers (backward linkages). A handful of header manufacturers can reach a large portion of the national market. Because racing can take place throughout the year, Southern California is also known for generating innovations in "speed" accessories. So for various reasons, header producers have congregated here. During the late 1970's, approximately sixteen manufacturers operated in the Los Angeles region. In the period of a few years, two companies moved to Mexico, and at least one went out of business. This study looked at one company that moved, one that remained, and one that closed.

These three companies all relied heavily on undocumented workers. Even though people with green cards were identified, the workers in each of the companies were quick to point out that most of the greencards were often falsified. If undocumented and greencard holders are combined, they account for 89 to 99 percent of the work force for all the companies. Tables 4.8 and 4.9 show the citizenship characteristics of the workforce in the three companies.

The resemblances of the companies went beyond drawing from a similar labor pool. They also used similar methods of production, and sold in similar markets. Headers are such common items that during 1981 they could be bought for between $45 and $60 retail in auto parts dealers or stores like J.C. Penney or Sears. What distinguished the competitive position of one company from another were their reactions to unionization, corporate strength as reflected through the means of ownership, and ultimately, the ways in which they responded to economic conditions. Because of their similarities, Company C will be described in greatest detail.

Table 4.8

Citizenship Status of the Workers in the Header Case Studies (1981)

Firm	Size of Firm/1	Number of Workers Studied/2	2 as % of 1	% undocumented/2	% greencard/2	% citizens/2
C	120	83	69	51	38	11
D	110	74	67	92	7	1
E	53	46	87	89	0	11

Table 4.9

Average Pay Per Hour Based on Citizenship Status for Header Companies (1981)

	Citizen		Greencard		Undocumented		Total	
Firm	#*	Pay**	#	Pay	#	Pay	#	Pay
C	9	$7.05	32	$6.74	42	$6.01	83	$6.40
D	1	$4.40	5	$5.10	68	$3.57	74	$4.00
E	5	$5.48	0	0	41	$3.82	46	$3.73

* number studied
** average pay per hour

Company C Profile

Company C, though small and specialized, has changed hands a number of times. It began in 1962. In 1972, it was bought by another firm, and from '72 to '76, it operated as a division of that firm. In 1974, a large international union was certified after a difficult campaign. The management waged a major effort against the union. They passed out anti-union material and threatened to close the plant and move to Chicago. Undocumented workers were further intimidated by deportation threats. There was an air of confidence by the company that the union would not win the election, yet they did by a close election (58 to 46). In the opinion of the local president, unionization made the company less attractive to the parent holder. In 1976, some of the individuals associated with the parent firm bought Company C, and maintained it as an independent corporation until 1982 when it merged with a company operating in Mexico, and subsequently moved the production unit there.

After unionization, the company became increasingly dominated by undocumented workers. In 1974, 25 to 30 workers out of 80 were non-Spanish-surname. But by 1982, when the plant moved, nearly all were Spanish-surnamed and most were undocumented. The workers mentioned that U.S. workers wouldn't stay on the job because wages tended to be poor. However, this claim could not be substantiated by the data. In 1982, wages ranged from $4.25 to $12.00 per hour with $6.40 being the average (and $3.35 the legal minimum). Instead, several other explanations for the increase of undocumented workers seem more plausible. First, there could have been a self-selection process on the part of the U.S. workers. Previous to unionization, job security and promotions were determined at the whim of the supervisors, significantly, all of whom were white. After the plant was unionized, a seniority system was instituted. If U.S. workers could not get

preferential hiring and promotions from the supervisors, they had less incentive to stay on the job.

A second consideration has to do with the control over the work force gained by the employer with the introduction of undocumented workers. Several employers mentioned the problem of worker dissatisfaction over promotional or personal disputes (if suspected undocumented workers were given promotions), since documented or U.S. workers have been known to call in the Immigration and Naturalization Service (INS). As a defense, some employers have separated their labor force by race or citizenship in order to avoid this problem. As noted in the overview this can be accomplished through selectivity in hiring.

Sometimes employers contend that they don't know the citizenship status of their workers, but in this case, the management knew that at least some were undocumented. In 1976 or '77, there was a factory raid by INS and 30 workers were arrested and deported. Afterwards, the union and the company maintained an informal understanding that a deported worker had a two week grace period to return to the job without losing seniority if arrested by INS. (This type of agreement has at times actually been written into a contract, but is hard to enforce.) Another indication that the employer knew who was undocumented was the distinct difference in average hourly wages paid to the citizen, greencard, and undocumented workers.

Despite the temporary work stoppage created by the raid, the company seemed financially well off. According to union files, in 1977, the company reported an after-tax profit of $500,000, an unusually high amount for a company of this size. In 1978, it's gross sales reached $7.1 million, and in 1981, the California Manufacturers' Register listed sales at between $5 and $10 million. It seems a little incredulous that the company would cite money problems when they

moved in 1982. Instead, it appeared the flight was motivated by a desire to escape the union, to lower production costs by automating, and to capture a greater share of the market by merging with another company, despite the benefit they gained by hiring undocumented workers.

Mechanization had been taking place in Company C over a series of years. Automation was introduced in the cutting, bending, and painting steps, with each automated step, a process requiring skill in the handling of the tubes was transferred from humans to computer controlled machines. Though fewer workers were needed, the union kept wages high and prevented the employer from releasing redundant workers. The successive changes in Company C's method of production and use of labor illustrates how the employment of undocumented workers can sometimes be just one step in a firm's search for lower production costs. In this case, the union was instrumental in keeping the wages and benefits high. With lower labor costs, it is conceivable that the company might have stayed in Los Angeles longer, but the move to Mexico put them in a strong competitive position relative to other Los Angeles header companies. Floor Plan 4.C illustrates the flow of work by situating the workers spatially. Table 4.10 is keyed to the floorplan and is a profile of the production workers. As the floorplan and table show, undocumented workers were clustered in the lower paying jobs (cutters, benders, or grinders) relative to the greencard holders or citizen workers.

Company D Profile

Company D was started in 1972. It was one of seventeen companies held by a Delaware based corporation, all of which were unrelated in their product of manufacture. The corporation was interested in operating Company D only as long as it returned an easy profit. In part, that meant employing primarily undocumented workers and paying them the minimum wage. According to the

Table 4.10

Company C - Production Worker Profile (all male)

Headers

#	Department	Occupation	Code *	Number of Workers	Sub-Group Number	Race **	Citi-zenship ***	Average Time on the job (Yrs.)	Average Hourly Pay ($)
(1)	Cutting	Cutting Operators	612	12	1	B	C	11	8.00
					6	L	U	2.5	5.15
					5	L	U	4.5	5.25
(2)	Bending	Benders	446	12	6	L	G	5.5	6.15
					6	L	U	5.5	6.15
(3) & (5)	Swaging	Swagers & Grinders	690	18	3	L	C	4.5	6.15
					1	L	G	4.5	6.15
					4	L	G	3.5	6.15
					1	L	U	1	6.15
					9	L	U	2	6.15
(4)	Welding	Welders	680	31	5	L	C	8	7.40
					3	L	G	8	7.40
					9	L	G	3	7.40
					1	L	G	1	7.40
					2	L	G	5.5	7.40
					4	L	U	3	7.40
					1	L	U	1	7.40
					6	L	U	5	7.40

Table 4.10 (continuation)

#	Department	Occupation	Code*	Number of Workers	Sub-Group Number	Race **	Citizenship ***	Average Time on the Job (Yrs.)	Average Hourly Pay ($)
(7)	Painting	Painters	644	10	1	L	G	5	6.15
					1	L	G	4	6.15
					4	L	G	3	6.15
					4	L	U	1	6.15
	TOTAL			83					$6.40

\# Department numbers are keyed to the floor plan

* 1970 Census Occupational Codes

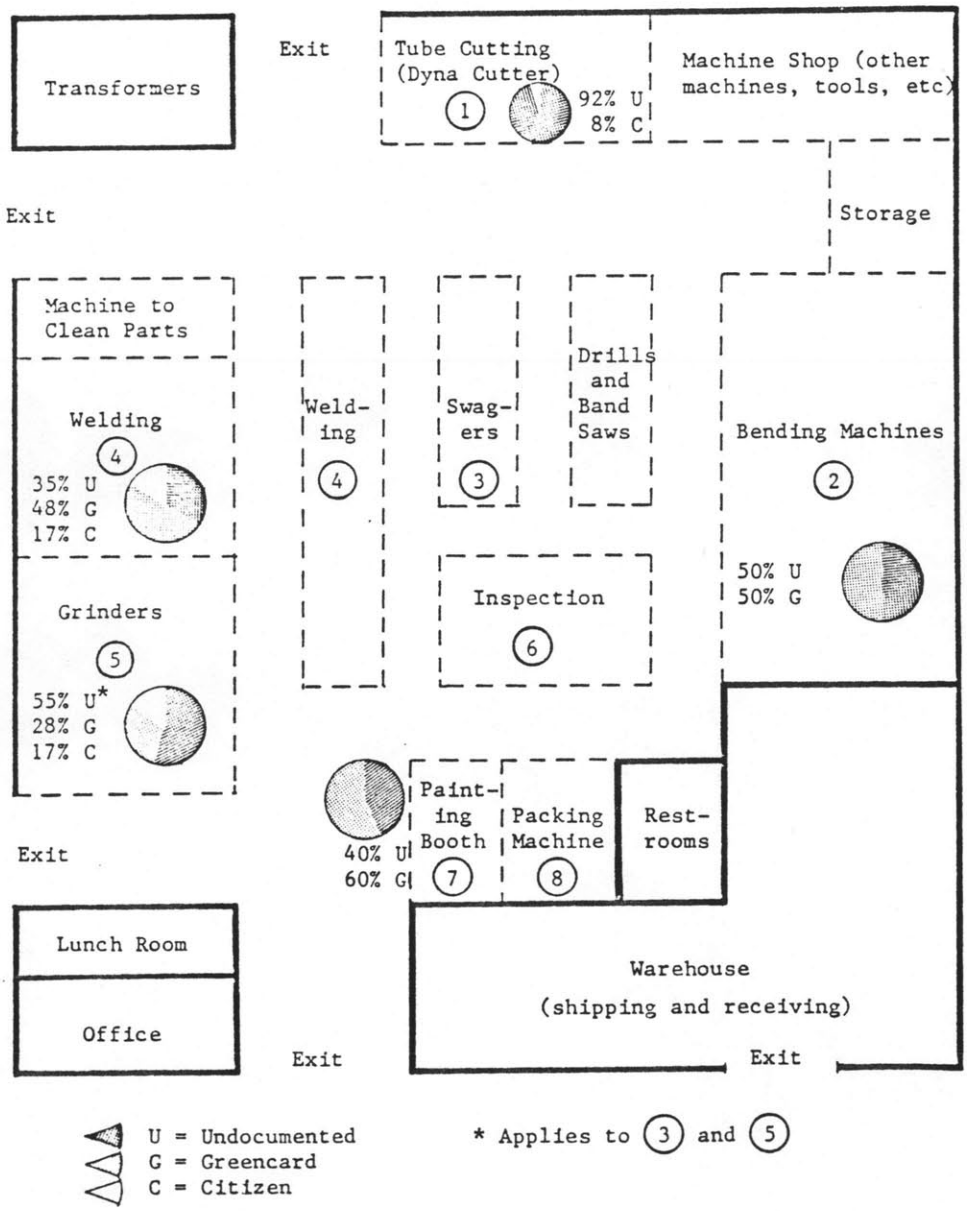
** A = Anglo; L = Latino; B = Black

*** C = Citizens; G = Greencard; U = Undocumented

Plan 4.C

A Basic Floor Plan in the Manufacture of Headers

(broken lines indicate general work areas)



workers, the company always employed undocumented workers and gave those they suspected to be undocumented preference in hiring. Although this company was approximately the same size as Company C and paid their workers nearly half the wage, they sold their product for slightly more. As noted in previous examples, this company also differentiated average wages paid to the production workers based on their citizenship status.

In 1980, the same union and local as in Company C began an organizing drive. The company threatened, harassed and intimidated the employees. Active union organizers were fired or disciplined because of their involvement. Despite a difficult campaign, the union won an election with 74 votes in favor of union representation and 13 against. Relations between the union and the company remained poor. The company filed charges against the union stating it coerced the workers, and the union filed counter charges that the company refused to bargain in good faith. The employees wanted a $1.50 per hour increase in wages, but the company countered with a 10¢ per hour offer. Negotiations broke down. Before a contract was signed, the company closed in June of 1981. The labor negotiator representing the company claimed that the company was in financial trouble, and that the corporation was trying to make it look profitable so as to sell it. Allegedly, no one was willing to make an offer, so the company was discontinued though it later resumed operations in another part of Southern California.

In general, the management of a company reserves a right to determine whether the company is profitable. In this case, the return didn't satisfy profit level goals. Previous to unionization, there was enough work to maintain two shifts on a regular basis. Despite an apparent demand for the product, one month after unionization letters were sent to customers stating that the company was going to discontinue unprofitable product lines, headers being one. With unionization, the

anticipated increase in wages would have reduced the level of profit, and this was enough reason for the corporation to close its subsidiary. Studies on plant closings have shown that it is not uncommon for conglomerates to close plants that are not returning at a level they think to be satisfactory. But as Company E suggests, independent firms, because of their limited financial resources relative to subsidiaries, have more necessity to adjust to the economic situation where they are located.

Company E Profile

Company E, about half the size of the other two, is independently owned. It had been in the same location since 1976, and before that, it had been operating elsewhere for seven years. During the recent period of operation, most of the workers had been undocumented. Several of the undocumented workers had been with the company for as long as 11 or 12 years, but the average was 3 years. Despite the relative stability of the work force, the workers were dissatisfied with their low wages. Paralleling the experiences of the other companies, most of the production workers were undocumented and received considerably less in wages than the resident workers. No greencard holders were identified.

The owner must have known about the citizenship of his workers because there had been two INS raids and several of the workers were arrested. The undocumented workforce is maintained because job openings usually go to friends of employees, who are themselves predominantly undocumented.

Inequalities in pay bothered the workers. Welders and janitors received the same wages, and all were paid low wages. The workers had heard that a particularly weak international union (one that usually organized in a completely different industry), organized undocumented workers, so they sought out this union. The union had to call a strike that lasted four weeks before the company signed the

contract. During this strike, the foreman and friends of the owner acted as strikebreakers. Despite management resistance, the union began representing the workers in 1979. As in the previous instance, the owners simply did not want to recognize the workers, so they immediately sold the company to new owners. The new owners were unwilling to concede anything to the workers, yet the union lacked sufficient experience to effectively represent them. Because of their weak organization, none of the conditions changed after unionization.

If stability in the size of the work force is an indication of stable demand, then the company appears to remain competitive. However, it had done so largely by using low-cost labor. One worker commented: "They treat us very bad. They humiliate us and make us work in things that are out of our capacity. They always do this because we don't have documents." This particular company has not automated the bending process but the workers are aware that their competitors have and that they have moved to locations of even lower cost labor. Perhaps the company will continue to be competitive by retaining this type of labor. But if the workers begin to effectively demand higher wages, it is probably a matter of time before they will not be able to compete with the other firms.

The headers market is clearly very competitive. In 1981, another remaining header company in Los Angeles went bankrupt and paid 8¢ on the dollar for their debts. This company was sold to another party and is still operating. Nearly all of the workers are undocumented, and at present, they are unorganized. The same union local that organized Company C is attempting to organize the workers in this company, but it will probably be another uphill fight. This particular company has been underpricing its product and talk of a potential price war has surfaced.

Case Study III -- Batteries

The Market for Batteries

Automotive language for the most common maintenance and replacement parts is TBA--tires, batteries, and accessories. Since they are fundamental to both new and used cars, TBA products are nearly recession-proof. Due to their relative immunity to vagrancies of the market, one national marketing firm predicted TBA to grow 130% from 1977 to 1985 (from $14.7 billion in gross sales to $33.9 billion).[10] Of this, battery sales were projected to grow from $2.4 billion to $6.8 billion, an increase of 145%.

Despite the anticipated growth in sales, not all battery manufacturers or even dealers have profited. Some have been hurt by the tendency of car owners to drive less. In addition, drivers now have the option to buy longer lasting "maintenance-free" batteries. Though the technology behind these batteries has been available for over thirty five years, they were only recently sold for popular consumption. In late 1974, J.C. Penney introduced the maintenance-free battery with an average life of 41 months, followed by Montgomery Ward in 1975.[12] Today these batteries are either standard or optional equipment on nearly all new cars and trucks. In recent years, the tendency in battery marketing has been toward eliminating the middle men. For example, mass merchandisers like Sears and J.C. Penney can handle the warehousing, thereby minimizing the role of jobbers. The stable product demand has also caught the attention of auto makers and conglomerates who have learned about the lucrative aftermarket in TBA. These large firms have the ability to enter in and out of both the original equipment and aftermarket which makes them formidable competitors to manufacturers not directly connected with either the major assemblies or other large firms.

The majority of battery manufacturers in the U.S. are located in the East and Midwest, close to the main assembly plants. For these producers, the original equipment market is particularly important. In the West Coast, aftermarket sales are more significant, so most of these firms are oriented toward the replacement market. At the time of this research (1981), fourteen firms were operating in Los Angeles.

The Production of Batteries

In the manufacture of batteries the production proceeds in eleven steps: (1) lead dust is melted; (2) and cast into grids; (3) the grids are taken to the pasting department where oxide fillers and water are mixed, put into pasting machines, and pressed onto the grids to form plates; (4) which are dried in dryers; (5) in the forming department, the plates are put in acid tanks to create a positive and negative electrical receptivity; (6) the plates are then stacked in the stacking department, alternating positive and negative and each time separated by insulation, to create battery cell elements; (7) the cells are then "burned" or welded together; (8) and in the assembly line, the elements are put in a container which is welded shut; (9) the battery itself is now charged wth an electric current--in "wet" charging, acid is poured into the battery and then subjected to an electric current; with a "moist-dry" process, the battery is emptied after it is charged; "dry" batteries use what is called "by-pass charging" where the elements are charged in tanks of acid before they are placed in the container; (10) the charged battery is now cleaned, labelled, and boxed; and (11) loaded for shipment. See the following illustration of a battery.

In capital intensive plants, stacking and welding are done by machines. Though more hazardous, this work is still completed by hand in many firms. Among the firms studied, only the low quality, labor intensive producer employed

Table 4.11

Citizenship Status of Workers in the
Battery Case Studies (1981)

Firm	2 as % of 1	Size of Firm/1	Number of Workers Studied/2	% undocumented/2	% greencard/2	% citizens/2
F	75	150	113	0	4	96
G	69	270	185	0	54	47
H	67	150	100	32	58	10

Table 4.12

Average Pay Per Hour Based on Citizenship
Status for Battery Companies (1981)

	Citizen		Greencard		Undocumented		Total	
Firm	#*	Pay**	#	Pay	#	Pay	#	Pay
F	108	$ 9.07	5	$ 9.75	0	-	113	$ 9.19
G	86	$11.38	99	$11.42	0	-	185	$11.19
H	10	$ 5.20	58	$ 5.15	32	$4.92	100	$ 5.09

* - number studied

** - average pay per hour

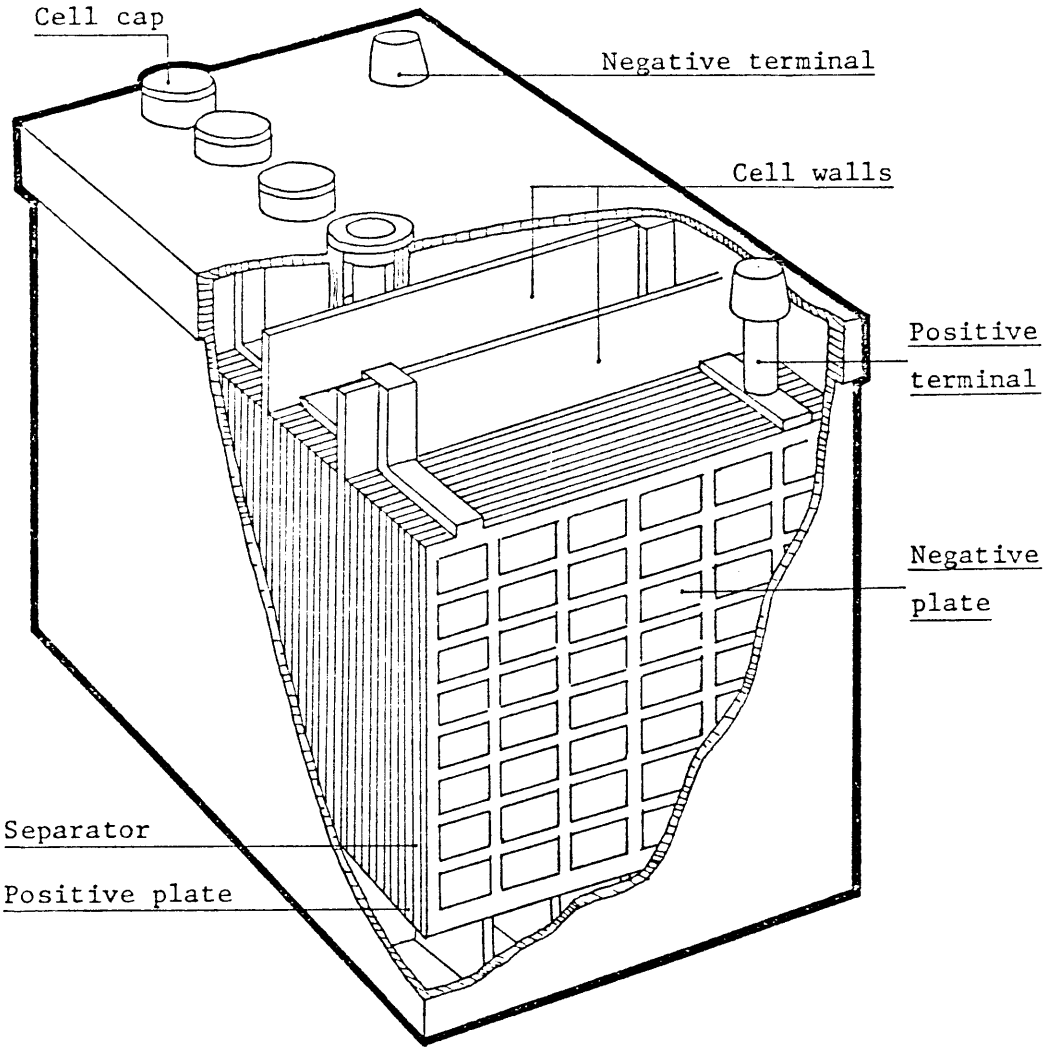
Table 4.13

Average Hourly Wage Based on Citizenship, Race, Sex, and Years on the Job for Company F

	Variable	Number	Average Hourly Wage	Standard Deviation
Sex	Male	110	$9.22	1.61
	Female	3	8.00	1.32
Citizenship	Citizen	107	9.07	1.81
	Greencard	6	9.75	1.29
	Undocumented	0	0	0
Race	Anglo	26	9.38	1.58
	Black	38	8.75	1.75
	Latino	46	9.43	1.45
	Asian	1	9.50	0
	Other	2	9.00	2.83
TOTAL (Total in Company 150)		113	$9.19	1.6

Illustration 4.3

A View of a Battery



undocumented workers. As the detailed case studies show, the workers are structured very differently within the labor intensive versus capital intensive firms. The company profiles will focus first on two capital intensive firms, followed by an analysis of a labor intensive producer. These three companies accounted for 20% of the battery manufacturers in Los Angeles in 1981. The differences in labor demand among the battery makers is summarized in Tables 4.11 and 4.12.

Company F Profile

Company F is an old Los Angeles establishment. It was started around 1932 when manufacturing was still undeveloped in the region. During World War II when labor was in short supply, this employer made a verbal commitment to their workers insuring good wages and working conditions. But when the war ended and the labor supply increased, the employer was reluctant to honor the expectations that were created. In order to stop the deteriorating terms set by the employer, the workers sought affiliation with a strong international union. With a vote of 3 to 1 in favor, the workers became unionized in 1946. Despite occassional strikes over wage disputes, rapport between the company and the union has been generally amiable.

In 1975, the company was sold to a large multinational conglomerate that has approximately fifteen other plants in the U.S., two in Canada, and one each in Mexico, Guatamala, and Indonesia. Their manufacture ranges from the production of batteries to smelters and mining. Since 1979, Company F has suffered from a drop in sales, but is still doing quite well. The California Manufacturers Register reported that gross sales for 1980 were within a range of $25-100 million.

When it comes to hiring, Company F draws from a mixture of Anglos, Blacks, Latinos, Asians, and other races. According to one worker, they discriminate

against women when it comes to hiring, but apparently not with regards to race. This company hires almost solely among U.S. citizen workers, although it occassionally employs a greencard holder. Table 4.13 shows the wage differentials based on citizenship, race, and sex.

Since the 1979 drop-off in sales, there has been a 16% drop in employment. The first to go have been mostly Black and Latino. Although there has been some talk about undocumented workers starting to gain employment in the plant, no evidence to that effect surfaced. Instead, as illustrated in Table 4.13 citizenship did not seem to be an issue affecting wage levels. Rather, it appears that there is a tendency towards stratification of wages based on race with Blacks faring least well. This pattern is repeated in Company G and will be analyzed in greater depth when that plant is discussed.

When several major auto assmblies shut-down in Los Angeles, this firm lost its primary market. Finally, in 1982, it closed the West Coast plant and focused production in their Midwest operations. In contrast, Company G, which also depended on contracts with automakers, simply switched to the high quality battery aftermarket. Although Company G responded differently to the changed market, it drew from the same type of workforce and used comparable production technology as in Company F. Consequently the following analysis should provide insight into the employment situation for Company F as well.

Company G Profile

Company G in many ways resembles Company F. Their primary product consists of high quality original equipment and replacement batteries. It is owned by a multinational corporation that has seven other facilities in the U.S., in addition to one in Japan and one in the Philippines. However, this firm is much newer than Company F. It was started around 1958. Shortly, thereafter, it was

Table 4.14

Average Hourly Wage Based on Citizenship, Race, Sex, and Years on the Job for Company G

	Variable	Number	Average Hourly Wage	Standard Deviation	Average Years on Job
Sex	Male	181	$11.40	1.23	6.27
	Female	4	11.22	0.50	6.00
Citizenship	Citizen	86	11.38	1.10	6.56
	Greencard	99	11.42	1.32	5.70
	Undocumented	0	-	-	-
Race	Anglo	28	11.63	0.90	8.12
	Black	7	10.79	0.90	4.17
	Latino	149	11.39	1.28	5.78
	Asian	1	10.50	0	6.00
TOTAL (in Company 270)		185	$11.40	1.22	6.27

unionized by the same local that had unionized the workers in Company F. But in contrast to their competitor, they are experiencing an increase in product demand. In 1979, they added a third shift and in 1980, their gross sales were reported to be within $10-25 million (California Manufacturers Register). A large part of the increase in demand is attributed to a contract with a major auto-maker.

Workplace relations, hiring practices, and patterns of employment also closely parallel Company F, but differ sharply from Company H. It is noteworthy that relations between the union and the company are generally good, although in 1975 there was a strike over cost of living wage increases. For the most part, it is not wages but safety and other factors that influence and structure workplace relations. This was immediately apparent with regards to the employment of women. It was explained that women of childbearing age are not employed because of the dangers presented by exposure to lead. It was also specifically mentioned that undocumented workers are not hired because federal government contracts require verification of citizenship on the part of the workers. While it is conceivable that some of the greencards are falsified, it is significant that workers are not sought for their undocumented status. Hiring practices are another indication of the lack of preference for undocumented workers, or even greencard holders. Although people learn about jobs by word of mouth, newspaper ads, or the union, in order to be hired they must first pass a physical exam, then another exam covering basic knowledge about production, and finally, they must have some proof of legal citizenship. To pass these entrance requirements, they must have a working command of English, which is an obstacle for many undocumented workers. Consequently, it is not citizenship but race, gender, and time on the job that explains variation in wages among workers. The newer job openings have been taken primarily by Blacks, and to a lesser extent women, resulting in them having

the lowest wage rate. Table 4.14 shows average wage levels based on citizenship, race, and sex for Company G.

Analysis of the race and gender distribution of the workforce with respect to departments and occupations shows them to be fairly well dispersed, although newer workers, such as Blacks, are more heavily concentrated in the less skilled positions. Using Floor Plan 4G which identifies the eleven basic production steps previously outlined, Table 4.15 situates the workers by department and according to the flow of production. Stacking and welding are highly automated. These steps, in partiuclar, distinguish the production technology used by Companies F and G from Company H. Other integral distinctions exist as well. Significantly, the capital intensive firms have access to the financial strength of a corporate parent to support their capitalization. In an independent firm, the risk associated with an investment decision is absorbed by a smaller corporate base. Consequently, such decisions may need to be deferred. And, as Company H illustrates, in order to compete in the market, a firm might have to draw from a different labor pool, and utilize a different method of production.

Company H Profile

This company was established in 1968 and is a family run enterprise. The main products are batteries for autos, boats, and other vehicles, and a lead based chemical used in lamps. The auto batteries sell at nearly half the price of those produced by the other two companies. They tend to be of lower quality and are sold to government agencies and jobbers who resell the product under a brand name. They do not sell their product directly to large distributors, such as Sears. In the last few years, there has been an increase in sales that led to an expansion of the workforce. Consequently, they realized gross sales of between $10 and $25 million in 1981 (California Manufacturers Register). In part, they have been

Table 4.15

Company G - Production Worker Profile

Batteries

#	Department	Occupation	Code*	Number of Workers	Sub-Group Number	Sex **	Race ***	Citi-zenship ****	Average Time on the Job (Yrs.)	Average Hourly Pay ($)
(2)	Grid Casting	Grid Casters	503	14	14	M	L	G	9.3	14.00
(3)	Pasting	Operators	690	11	2	M	L	C	3	12.00
					9	M	L	G	3	12.00
(4)	Plate Forming	Process Attendant	780	7	1	M	A	C	10	10.80
					1	M	L	G	12	10.80
		Processors			5	M	L	G	2	10.00
(7)	Welding	Lead Person	690	2	1	M	A	G	8	11.80
		Operator			1	F	L	G	5	11.50
		COS Workers	780	22	1	M	B	C	5	11.20
					21	M	L	G	6.5	11.20
		Welders	680	22	1	F	A	C	6	10.50
					2	M	B	C	4.5	10.50
					16	M	L	C	7.5	10.50
					3	M	L	G	7.5	10.50
(9)	Charging	Laborers	780	5	1	M	B	C	2.25	9.00
					4	M	L	G	2.25	9.00

Table 4.15 (continuation)

#	Department	Occupation	Code*	Number of Workers	Sub-Group Number	Sex **	Race ***	Citi-zenship ****	Average Time on the Job (Yrs.)	Average Hourly Pay ($)
(10)	Finishing	Loaders	753	9	2	M	L	G	6	10.40
					7	M	L	G	6	10.40
(11)	Shipping and Receiving	Lead Person	770	12	1	M	A	C	2	11.23
					4	M	A	C	2	10.63
					7	M	L	G	2	10.63
		Lead Person	753	5	1	M	L	C	16	13.00
		Assistant Lead			1	F	A	C	10	11.60
		Assistant Group Leaders			3	M	L	G	4	11.60
		Packers and Wrappers	780	25	2	M	A	C	2.25	10.00
					3	M	L	C	.5	8.90
					1	M	A	G	14	11.60
					1	M	A	G	4	11.30
					1	M	B	G	3	11.60
					1	F	B	C	3	11.30
					3	M	L	C	12.3	11.60
					1	M	L	C	4	11.30
					1	M	L	G	3	11.60
					4	M	L	C	3.5	11.60
					5	M	L	C	3.5	11.00
					2	M	L	G	3.5	11.00

Table 4.15 (continuation)

#	Department	Occupation	Code*	Number of Workers	Sub-Group Number	Sex **	Race ***	Citi-zenship ****	Average Time on the Job (Yrs.)	Average Hourly Pay ($)
		Drivers	715	20	5	M	A	C	16	13.00
					13	M	L	C	6	13.00
					2	M	L	G	6	13.00
		Mechanics	481	2	1	M	A	C	2	12.00
					1	M	A	C	1	10.80
(12)	Maintenance	Mechanics "A"	492	8	8	M	A	C	8.8	12.00
		Mechanics "B"		8	1	M	A	C	6.5	11.00
					4	M	L	C	6.5	11.00
					3	M	L	G	6.5	11.00
		Helpers	780	3	3	M	L	G	6.5	9.00
	Testing	Lead Person	610	10	1	M	L	G	10	12.00
					1	M	B	C	6.5	11.40
					8	M	L	G	6.5	11.40
	TOTAL				185					$11.40

\# Department numbers are keyed to the floor plan

* 1970 Census Occupational Codes

** M = Male; F = Female

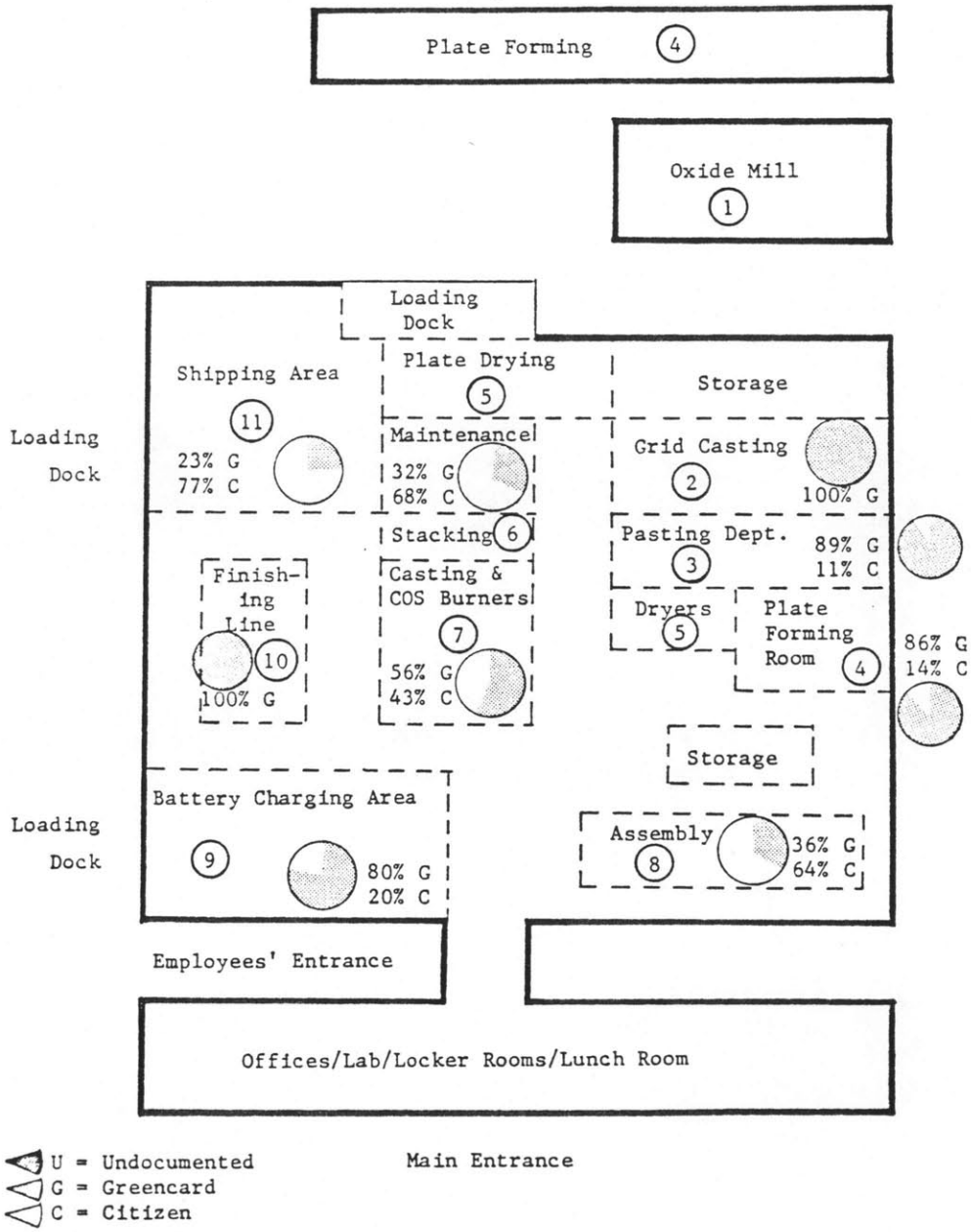
*** A = Anglo; L = Latino; B = Black

**** C = Citizen; G = Greencard; U = Undocumented

Plan 4.G

A Basic Floor Plan in the Manufacture of Batteries

(broken lines indicate general work areas)



successful because they have cut corners on wage rates and working conditions. But the poor situation merely coalesced the workers around the need to unionize.

From its inception, the company found ways to lower production costs. They employed undocumented workers, paid the minimum wage, provided minimal sick leave, vacation time or other benefits, and promoted workers based on favoritism. The workers had to pay for their own health insurance and received straight-time pay for overtime work. A series of conditions led to the struggle for unionization; low salaries, discrimination in promotion, and job security. In 1972, the workers chose to hold elections for representation by a strong international union. During the organizing drive, the managers tried to win the trust of the workers, for example, by relaxing pressure over production quotas. As the campaign gained momentum, so did the company offensive. One worker described the company's actions in the following way: "Whereas before they wouldn't say 'hello' to workers, all of a sudden they began to talk to us. They sent us letters explaining...their point of view about the union. During the last days prior to elections, they tried to convince the workers that we could work without a union. They guaranteed our jobs unless we were incompetent." Despite the company's overtures, the workers voted on behalf of the union.

This situation is very interesting because in contrast to the other two battery manufacturers, here wages remained low and many other things were unchanged regardless of the union (in fact, the same union local). Benefits and negotiated work rules go unenforced because of three factors: the union has not aggressively supported the workers; the workers do not have confidence in their shop stewards and fear disciplinary or repressive actions by the foreman; and lastly, because the employer is difficult to negotiate with. Again, it is the workers words that best describe the situation: "The son of the owner is one of the few despot persons I

have known. He sees Latino workers as machines, as things which are no good, but at the same time...usable to making him rich, but [without]...rights to receive any type of guarantees. For him the worker is only a productive machine which is [simply discarded when he is] no longer productive..." As a result, workplace relations remain hierarchical at best. Promotions still depend on favoritism. As for the undocumented, "as long as you have a good recommendation from the foreman [this] is sufficient, even if you could not speak English correctly." The union is clearly very weak. The contract has been revised three times, but it has resulted in few changes. Rather, the contract discussions have strained relations between the workers and the union. During negotiations over the second contract, the workers wanted to strike but the union would not support them. Consequently, the workers accepted a contract they thought was against their own interests. Strikes appear to be a common mechanism for bringing attention to workplace disputes. Since 1973, there have been three strikes, the latest accurred during the time of the interview over the extent of health benefits.

The perception of the workers is that their work is difficult and dangerous, and that they are poorly paid. The labor intensive work coupled with the chemical hazards, continual verbal abuse by the supervisors, and a generally repressive atmosphere has created tremendous resentment among the workers. As one worker said, the job requires "that the persons be willing to kill themselves, to commit suicide for this little wage." Despite the poor working conditions, new jobs are going to friends and family members of the production workers, especially if the worker has good relations with the foreman. Thus a type of "compadre" system is in place where the foreman is able to tap into the workers' network of kin and friends.

With the recent increase in product demand, the company has responded several ways. First, it has added some new equipment, but none of it has necessitated a more skilled labor force to operate it. The new machines have been for casting and pasting. Stacking and welding are still performed by hand. Secondly, it has expanded its laborforce, which is primarily undocumented. Thirdly, it has introduced speed-up in the production line to get the same workforce to manufacture more batteries. At the same time, the workers have been forced to increase the speed of production, they have been given lower quality lead and paste to work with which are heavier and more difficult to handle. Fourthly, they have made overtime obligatory. Refusal to work overtime is grounds for a warning and three warnings are sufficient for a lay-off. This unpopular action led one worker to comment: "I...thought that the war against slavery had ended, but it still exists." These combined measures have allowed the company to survive the market so far. But the labor situation is very unsettled and could be a catalyst forcing the employer to change either the place or method of production in the future.

Summary

If there is one characteristic common to firms employing undocumented workers, it is that of an underlying instability. This surfaced in a number of ways, one being the repeated union antagonism. Companies secure in their market positions would have less need to be constantly combative. Another illustration of instability was the frequent reference to change in ownership, especially coincident with union drives or a drop in profit levels. But the most important indicators were the long-run positions taken by the firms in their efforts to remain viable. The instability, though rooted in the market, was manifested through mobility, technological change, or changes in the employment structure. Ultimately, the

instability was passed on to the laborforce: to workers who lost their jobs due to capital flight; to those in the downgraded jobs that resulted from the restructuring; and to the undocumented who were constantly paid lower wages than their co-workers.

Though the wheels, headers, and batteries firms were very different in their produciton requirements and product markets, their shared dependence on undocumented workers calls attention to some salient areas of similarity. One is the lack of manueverability the firms encountered in the product market. Wheel makers were constantly fluctuating between the OEM and aftermarket; battery producers seemed more channeled, either they produced for the OEM, or they produced for the aftermarket; headers were predominantly an aftermarket item. When the major assemblies left California (except for one plant in Van Nuys), OEM dependent producers, such as the battery manufacturers, simply closed-up. With only the aftermarket sustaining the regional economy, other OEM producers shifted toward this direction, thereby adding to a relative excess in the number of producers. Among the other lines where the OEM had not been so well developed, market pressures were more keyed to consumer demands. For these firms, if they could remain in the market, demand was forthcoming, but that was also a function of many competitors dropping out. In both cases, a rapid alternative was not to be found through other avenues, such as switching to foreign markets, or changing product lines. These firms were constrained by their narrowly defined product markets.

Another common trait among the firms was the consistency in the way in which they employed undocumented workers. At the job sites, the undocumented were usually the most recent entrants, the least senior with respect to job classification, and least well paid. In general, they were hired because an employer

was labor dependent in the method of production, and could use them to lower the wage-bill. By the way work was organized, an employer could also introduce increased control in the workplace. Among the cases presented, the undocumented workers were often skilled or semi-skilled. This contrasts with the conception that these workers only engage in rationalized work, that is, work that is deskilled and necessitates a cheap, compliant laborforce. Though they were skilled, they were nonetheless treated like cheap labor. Consequently, as the case studies illustrate, the undocumented workers were a bridge for the Los Angeles automobile parts producers as they began to adjust their cost structures to their best advantage. In this capacity, they supported the transformation of the industry, including the erosion of subordinate primary jobs, and in the process, were themselves subjected to the ranks of the unemployed and underemployed.

The purpose of the case studies was to observe the changes that occurred in the automobile industry during a critical period. However, auto is only one industry that contributed to the "deindustrialization" in the U.S. during the 1970's and '80's. A broad trend towards industrial restructuring was evident among many manufacturers. Thus, the next step was to understand whether the employment and wage trends observed in the case studies were characteristic of other industries, particularly those undergoing structural transformation. The case studies were therefore complemented by an aggregate analysis of manufacturing firms in order to determine, first, the main characteristics of employers of undocumented workers, and secondly, the process of wage allocation within firms when citizenship becomes a prominent factor.

Chapter 4 Notes

1. See Philip Mattera, "Small is Not Beautiful: Decentralized Producton and the Underground Economy in Italy," Radical America, Vol. 14, No. 5, September/October 1980. He writes, "women in Turin were turning out parts for Fiat subcontractors on basement presses," p. 68.

2. Daniel Quinn Mills, Labor-Management Relations, New York: McGraw-Hill Book Company, 1978, p.49-50.

3. Quote by Phillip W. Colburn, President, Orion Industries, Inc., in Mithcell Gordon, "Performance Cult," Barrons', May 11, 1970.

4. Mitchell Gordon, "Performance Cult," Barron's, May 11, 1970.

5. Donald Woutat, "In '82 Autos, the Large and Luxurious Thrived," Los Angeles Times, Part IV, January 18, 1983.

6. Emma Rothschild, Paradise Lost: The Decline of the Auto-Industrial Age, New York: Random House, 1973, p. 37.

7. Ron Landry, "How New-Car Dealers are Gaining Hard-Parts Aftermarket Share," National Petroleum News, January 1980.

8. Edward L. Kaufman, "Custom Wheel Market: Poised for Growth in 1983," Automotive Chain Store Magaine, January 1983, p. 10-15.

9. Steve Manning, "Special Report: Wheels and Tires, The Canadian Aftermarket, April/May 1982.

10. "Performance Guide," Hot Rod Annual, 1982.

11. Francis J. Gawronski, "Aftermarket Sales Seen at $172 Billion by 1985," Automotive News, September 18, 1978, reference is to a report by Frost and Sullivan, Inc.

12. "New Entries Stir Up Staid Battery Industry," Industry Week, January 3, 1977.

CHAPTER 5

WHY AND HOW "TRANSITIONAL" FIRMS EMPLOY UNDOCUMENTED WORKERS

Introduction

Given the widespread transformation of basic manufacturing, it was important to learn to what extent the case study findings could be generalized. Consequently, the sample of firms was broadened to twenty-one firms representative of several manufacturing industries. The analysis was along two dimensions. The first was to look at firms in the aggregate in order to identify the characteristics of those with the greatest propensity to employ undocumented workers. The second was to observe within-plant data for the purpose of discerning how wages are allocated when citizenship is a significant consideration. Based on the broader sample, this analysis used regression and descriptive statistics. The findings will be discussed first at the level of the firms, and secondly, at the level of the workers. These discussions are preceded by an overview of the firms and of the workers, respectively.

Overview of the Firms

The twenty-one firms were similar to the casee studies in that they were selected from the manufacturing sector, and they all paid above the minimum wage. But, as with the case studies, they also exhibited a diversity that reflected their positions in the product and labor markets. For example, some were strong core firms in terms of their position in the product market (including an auto assembly plant and an ordnance manufacturer), while others were weaker core firms (such as a producer of industrial trucks). Most operated in the periphery in

that they responded to product markets defined by the core, however, they too ranged from holding relatively dominant market positions (such as some of the battery manfuacturers), to those that were clearly struggling (hardware and fabricated plate work). Among these firms, 13 were unionized, 8 were not non-unionzed; 11 subsidiaries, while 10 were independently owned. The largest firm employed 2,400 workers, and the smallest only 35. Lastly, though some hired undocumented production workers exclusively, the majority had varying numbers in their workforce, while others had no undocumented workers at all. The average for all the firms was 43% undocumented workers.

The 21 firms provided data on 2,321 production workers. The method for obtaining the information was the same used in the case studies, however the criteria for selection were expanded to include a broad sample of producers. Table 1 identifies the products associated with the plants, their union status, and form of ownership. Table 2 shows their representation among related Los Angeles County industries, and Table 3 summarizes the citizenship characteristics of the workers.

Table 5.1
Firm Products, Union Status, and Ownership

Firms		SIC*	Product	Union	Subsidiary
1.	assembly	2451	mobile homes	no	no
2.	assembly	3792	travel trailers	no	no
3.	assembly	3711	motor vehicles	yes	yes
4.	assembly	3737	industrial trucks	no	no
5.	wheels**	3714	motor vehicle parts	yes	yes
6.	wheels**	3714	motor vehicle parts	no	yes
7.	wheels	3714	motor vehicle parts	no	no
8.	wheels	3714	motor vehicle parts	no	yes
9.	headers**	3714	motor vehicle parts	no	yes
10.	headers**	3714	motor vehicle parts	yes	no
11.	headers**	3714	motor vehicle parts	yes	no
12.	batteries**	3691	storage batteries	yes	yes
13.	batteries**	3691	storage batteries	yes	yes
14.	batteries**	3691	storage batteries	yes	no
15.	spring brakes	3714	motor vehicle parts	yes	yes
16.	alternators, clutches	3714	motor vehicle parts	no	no
17.	non-auto	3429	hardware	yes	no
18.	non-auto	3079	miscellaneous plastics	yes	yes
19.	non-auto	3443	fabricated plate work	yes	yes
20.	non-auto	3469	metal stampings	yes	no
21.	non-auto	3489	ordnance	yes	yes

* Standard Industrial Code ** Case Study Firms

Analysis of Firms by the Extent of Undocumented Employment

Though the economic downturn was felt industry-wide, as the case studies illustrated, this did not lead all the firms to begin employing undocumented workers. Yet, among those that did, the extent to which they relied on this laborforce varied tremendously. This diversity became an object of inquiry. If clustered into groups according to the percent undocumented employed, within the 21 firms sample, the distribution was fairly wide: 4 had no undocumented; 1 had between 1% and 24%; 3 had between 25% and 49%; 7 had between 50% and 74%; 5 had between 75% and 99%; and 1 had 100%. Given this range, it was therefore possible to undertake an analysis of the variables most closely associated with the tendency to employ undocumented

Table 5.2*

Los Angeles County Industrial Context

	Sample			Los Angles		
SIC	# firms in study	total # of employees	# employees studied	# firms in L.A.	# employees in L.A.	% L.A. firms studied
2451	1	320	154	9	610	11.11
3079	1	1,000	339	697	27,607	.14
3429	1	140	55	110	8,362	.91
3443	1	35	25	76	5,044	1.31
3469	1	105	64	181	6,431	.55
3489	1	1,500	108	6	1,000-2,499	16.67
3537	1	300	113	26	921	3.84
3691	3	570	396	14	1,124	21.43
3711	1	2,400	259	9	5,000-9,999	11.11
3714	9	2,717	695	191	5,000-9,999	4.71
3792	1	150	113	24	500- 999	4.17
Total	21	9,237	2,321	1,343	indeterminate	1.56

Total manufacturing establishments in Los Angeles County: 18,491

Total manufacturing employment in Los Angeles County: 929,210

Total establishments in Los Angeles County: 167,523

Total employment in Los Angeles County: 3,173,460

*Los Angeles County data based on March 1981 County Business Patterns.

Table 5.3

Citizenship Characteristics of the Workers

Firm	Size	(A) # Workers Studied	% of Total	(B) # Undocumented	B as % of A	(C) # Green-carders	C as % of A	(D) # Citizens	D as % of A
1	320	154	48	71	46	59	38	24	16
2	150	113	75	107	95	6	5	0	0
3	2,400	259	11	0	0	38	15	221	85
4	150	113	75	18	16	46	41	49	43
5*	350	205	59	123	60	71	35	11	5
6*	300	122	41	41	33	12	10	69	57
7	1,000	10	1	8	80	0	0	2	20
8	550	18	3	18	100	0	0	0	0
9*	110	74	67	68	92	5	7	1	1
10*	53	46	88	41	89	0	0	5	11
11*	120	83	69	42	50	32	39	9	11
12*	150	113	75	0	0	6	5	107	95
13*	270	185	69	0	0	99	54	86	46
14*	150	98	65	31	32	57	58	10	10
15	300	93	31	59	63	25	27	9	10
16	93	44	47	31	70	10	23	3	7
17	140	55	39	37	67	0	0	18	33
18	1,000	339	34	249	73	68	20	22	7
19	35	25	71	19	76	4	16	2	8
20	105	64	61	43	67	19	30	2	3
21	1,500	108	7	0	0	0	0	108	100
Total		2,321		1,006	43	557	24	758	33

*Case study firms.

workers. The first step was to distill from the case study material likely factors related to the extent of undocumented employment.

The case studies indicate that labor intensive, low-paying firms with either a parent holder interested only in extracting high profits, or financially constrained independent firms were likely employers of undocumented workers. That many of these employers encountered difficult product market conditions which necessitated access to easily released labor revealed that high labor turnover, in addition to low wages, were important in helping them keep down production costs. These factors suggested that variables related to production technology, product market conditions, and corporate strength were associated with the employment of undocumented workers. In order to learn more about this relationship, a regression was run on the 21 firms with selected firm characteristics, using the percent undocumented as the dependent variable.

Production technology, here, refers to the usage of labor relative to other factors of production (capital, land). Ideally, the variable selection would have included time series data on the rate and extent of automation, such as capital/labor ratios. In the absence of this data, the analysis depended on readily available information. Therefore, production technology was represented by laborforce characteristics, which in this instance consisted of the average hourly wages in the firm. The assumption is that low wages are correlated with labor intensity, especially if the work is correspondingly low-skilled, and this, in turn, would be related to the propensity to employ undocumented workers.

Product market conditions were represented by the extent of labor turnover and the average years workers were employed in a firm on the assumption that market stability affects the level of employment. Another indicator that was not available would have been inventory accumulation and usage.

Corporate strength was seen as a function of a firm's corproate status (subsidiary or independent) and size of employment. Subsidiaries operate in a mixed position. While they have the financial bases, access to markets, and other benefits that might be derived from a parent company, they can also be seen as ventures a corporation would hold for profit speculation. Independently owned firms (sole ownership) are not constrained by the corporate policies of a parent holder, but they face more limited resources. In light of this, it was assumed that independent firms would have a greater tendency to employ undocumented workers. The size of the firm was seen as another measure of corporate strength based on the concept that larger firms would be more established in a market and less dependent on undocumented workers. A final variable thought to be related was unionization. The logic was that stronger firms (subsidiaries, large) would be most likely targets for unionization, and the least likely to employ undocumented workers. A variable that would have been useful, but unavailable, was corporate profits.

A regression was run to test the relationship of these variables to the percent of undocumented workers in a firm. The results showed that unionization and size are statistically insignificant. Furthermore, the subsidiary variable emerged with a positive parameter which means that a subsidiary is more likely to hire undocumented workers than an independent firm. As the regression indicates, undocumented workers are well distributed among large and small firms, unionized and non-unionized, and more likely among subsidiaries, suggesting that ownership status is less of a distinguishing characteristic than had been expected. What the firms that hire undocumented workers have in common are low wages and high labor turnover (high variability in employment during the year and low average job tenure).

In order to explain the percentage of undocumented workers in a firm, the following variables were selected:

Hourly = average hourly wage of workers

Subsidiary (Sub) = 1 if the plant is a subsidiary, 0 if independent, for each worker

Time (T) = average years on the job of a worker

Employment variability (EV) = employment variability in the national 4-digit SIC to which the firm belongs (1980) for each worker,[1]

where EV, a variable that measures percent change in the amount of employment, was developed from the following formula:

$$\frac{E_{\text{Maximum (the month with the greatest employment)}} - E_{\text{Minimum (the month with the least employment)}}}{E_{\text{Minimum}}} = EV$$

Analysis of standardized coefficients show that the leading variables explaining the percent of undocumented workers in plant j given worker i are hourly wages followed by the employment variability. From this equation, each $1 in average wage subtracts 9.6%, and each average year of employment tenure in a firm by the workers subtracts another .3%. A subsidiary firm contributes 6.5% to the total, while a 100% level of employment turnover in the SIC adds 20.6%. Sixty-seven percent of the variation in the percent of undocumented workers in a given plant is accounted for by this model. Since the model is derived from a small sample (21 firms), these results should be seen as preliminary, yet indicative of characteristics of firms employing undocumented workers. From this equation, the firms with a larger percent of undocumented workers would tend to pay lower wages, experience high labor turnover, and operate as a subsidiary.

Table 5.4

Model I Results[2]

Dependent variable = percent undocumented in the jth plant where the ith person works ($PUNDOC_{ij}$)

Mean = 0.43

R^2 = 0.67

N = 2,321 workers in 21 firms

Variable	Mean	Slope	t-ratio	p	Standardized Co-efficient	Standard Error
b_o (intercept)	--	0.984	69.54	*	0	0.014
$Hourly_{ij}$	6.70	-0.096	-48.41	*	-0.81	0.002
$Time_{ij}$	6.40	-0.003	- 3.74	**	-0.06	0.001
$Subsidiary_j$	0.66	0.065	6.91	*	0.09	0.009
Employment Variability$_j$	0.36	0.206	8.32	*	0.10	0.025

* - probability of result due to chance smaller than 0.001.

** - probability of result due to chance smaller than 0.002.

The final regression equation is:

$$PUNDOC_{ij} = 0.984 - 0.096Hourly_{ij} - 0.003T_{ij} + 0.065Sub_j + 0.206EV_j$$

To illustrate application of this model, in a firm paying $3.35 per hour on average (the legal minimum), whose workers have been employed for 10 years on average, that is a subsidiary, and in an average year will have a 10% variability in employment, the percent of undocumented workers is 71.8%. If everything is held constant but the average wage is $10.00 per hour, the percent of undocumented workers drops to 8.0%. Again, if everything is held constant, and the average wage is $3.35 per hour, but the change in employment rises to 100%, the percent of undocumented workers increases to 90.3% (see Table 5.5).

Table 5.5

Model 1 Predictions Comparing Firms With Respect to Wages and Employment Variability

		Predicted % Undocumented Per Variable		
	Variable (x 100 =)	$3.35/Hour	$10.00/Hour	100% Change in Employment
b_o (intercept)	0.984	98.4	98.4	98.4
Hourly	-0.096	-32.2	-96.0	-32.2
Time	(10 x -0.003)	- 3.0	- 3.0	- 3.0
Employment Variability	$\frac{110-100}{100} = .10$ (.1 x 0.206)	2.1	2.1	$\left\{\frac{100-50}{50} = 1.0\right\}$ =20.6
Total	100	71.8%	8.0%	90.3%

The regression results are indicative of areas requiring further research. Least developed in the literature is now ownership patterns contribute to the demand of undocumented workers. Studies of plant closing show that absentee-owned corporations are responsible for the greatest amount of job loss due to plant shutdowns, and are the first to reduce employment during recessionary periods.[3] In border areas, like Los Angeles, locally-owned and independent firms have easy access to foreign production sites, so capital flight for the purpose of internationalizing production may be equally pervasive among non-absentee controlled firms here. If firms that move retain their domestic product markets, they force their U.S. competitors to follow suit or find alternative ways to lower costs. However, without detailed studies of how firms in border regions behave, it is difficult to know whether capital mobility is spreading across firms differentiated by ownership, how this affects the ownership of firms remaining in the U.S., and whether ownership patterns provide insight into the employment of undocumented workers in places like Los Angeles. The case studies and the statistical analysis suggest that ownership is probably important and worthy of further inquiry.

The relationship between high turnover, low job tenure and an increased incidence of undocumented workers is not surprising. Since these workers are easily released, fluctuation in employment could result from a firm's need for constant economic adjustment, especially during periods of unstable product demand. The lack of tenure reflects their recent entry into subordinate primary jobs. One study of unapprehended undocumented workers residing in the U.S. for more than one year found that the longer they remained in the U.S., the greater their likelihood of realizing a rise in occupational status.[4] However, their length

Table 5.6

Average Wage of Workers By Percent Undocumented in the Companies

Firm Size	# Studied	Percent Undocumented	%	Company Number	Citizen	Greencard	Undocumented	Average for Company	Company Status**	Union
2,400	259	0	0	3	$10.88	$10.91	0	$10.89	S	Yes
150	113		0	*12(F)	$ 9.07	$ 9.75	0	$ 9.11	S	Yes
270	185		0	*13(G)	$11.38	$11.42	0	$11.40	S	Yes
1,500	108		0	21	$ 8.48	0	0	$ 8.48	S	Yes
		Average for Group			$10.09	$11.21	0	$10.35		
150	113	1-24	16	4	$ 6.89	$ 6.19	$5.37	$ 6.37	I	No
320	154	25-49	46	1	$ 6.11	$ 5.98	$5.77	$ 5.83	S	No
300	122		33	* 6(B)	$ 6.73	$ 6.47	$6.19	$ 6.52	S	No
150	98		32	*14(H)	$ 5.20	$ 5.15	$4.92	$ 5.07	I	Yes
		Average for Group			$ 6.44	$ 5.56	$5.71	$ 5.86		
350	205	50-74	60	* 5(A)	$ 5.82	$ 4.40	$4.15	$ 4.33	S	Yes
120	83		50	*11(C)	$ 7.05	$ 6.74	$6.01	$ 6.40	I	Yes
300	93		63	15	$ 4.70	$ 5.34	$4.81	$ 4.94	S	Yes
93	44		70	16	$ 7.10	$ 5.05	$3.85	$ 4.34	I	No
140	55		67	17	$ 7.10	0	$3.57	$ 4.73	I	Yes
1,000	339		73	18	$ 8.06	$ 6.86	$5.38	$ 5.86	S	Yes
150	64		67	20	$ 4.08	$ 4.02	$4.00	$ 4.01	I	Yes
		Average for Group			$ 6.83	$ 5.72	$4.81	$ 5.18		
150	113	75-99	95	2	0	$ 4.63	$4.05	$ 4.08	I	No
1,000	10		80	7	0	$ 5.38	$3.97	$ 4.55	I	No
53	46		92	9(D)	$ 4.40	$ 5.10	$3.57	$ 3.68	I	No
110	74		89	10(E)	$ 5.48	0	$4.82	$ 4.00	S	Yes
55	25		76	19	$ 4.25	$ 4.69	$4.03	$ 4.15	S	Yes
		Average for Group			$ 5.04	$ 4.80	$3.90	$ 4.01		
550	18	100	100	8	0	0	$3.35	$ 3.35	I	No

* = Case Study
A,B = Wheels
C,D,E = Headers
F,G,H = Batteries
** = S=Subsidiary; I=Independent

Table 5.7

Production Worker Average Hourly Earings--
National and In Firms Studied (1981)

SIC		National Hourly Earnings ($)	Firms Studied Hourly Earnings ($)	N	% Undocumented
2451	Mobile Homes	6.40	5.91	1	46
3079*	Misc. Plastics	6.55	5.85	1	73
3429	Hardware	8.15	4.73	1	67
3443	Fabricated Platework	8.74	4.15	1	73
3469	Metal Stampings	7.27	4.91	1	67
3489*	Ordnance and Accessories	8.24	8.48	1	0
3537	Industrial Trucks	8.26	6.35	1	16
3691	Storage Batteries	8.61	9.21	3	0-32
3711	Motor Vehicles	12.29	10.89	1	0
3741	Motor Vehicle Parts	10.39	4.99	9	37-100
3792	Travel Trailers	6.76	4.08	1	95

* 3-digit SIC statistics

Source: U.S. Department of Labor, Bureau of Labor Statistics, Supplement to Employment and Earnings Revised Establishment Data, June 1982.

of employment across manufacturing industries, or within firms, and in contrast to other workers has no precedence in the literature for comparison.

The correlation between low wages and the percent of undocumented workers was also to be expected, though specification of this relationship, again has no counterpart research. In a study that attempted to hold constant occupational, industry, and regional variables, it was found that with "considerable and consistent" disparity, these workers were paid less than citizen workers. Among the employers in this study (which drew from a number of sectors), undocumented workers earned an average of $2.66 per hour while for U.S. workers in comparable production and non-supervisory positions, the average wage was $4.47 per hour.[5] In this same study, the authors speculate that a relationship exists between the average wage and the percent of undocumented workers in a firm, but evidence to this effect has been lacking. This wage relationship is sometimes referred to as a "depressant effect" because the presence of undocumented workers is hypothesized to be coincident with a downward pressure on the prevailing wage structure. However, these parallel tendencies result from complex, mutually reinforcing reasons (e.g., low wage jobs may be more acceptable to undocumented than to U.S. workers, but the availability of the undocumented workers supports the offering of low wages), and should not be mistakenly assumed to imply causality. The findings from Model 1 support the case study observations of wage stratification based on citizenship. In fact, this phenomenon was prevalent among all twenty-one firms of the broader sample. As the percent of undocumented workers increased, the average rate of pay decreased. This data is clearly displayed in Table 5.6.

As shown in Table 5.7, the firms studies generally had wage levels below the national average. The only two SIC's that had wages above the national average were composed of firms with no undocumented (though SIC 3714 also had no

undocumented workers, but fell below the national average), thus suggesting that a "depressant effect" exists.

Lastly, the variables that proved to be statistically insignificant challenge some widely held conceptions. First, the case studies and statistical analysis reveal that unionization is unrelated to the percent of undocumented workers in a firm. Some unions aggressively organize in firms with undocumented workers, but that many won't is understandable. Current labor legislation affects union behavior since, if enforced as written without guaranteed anonymity, it could lead to the deportation of undocumented workers.[6] The possibility of deportation makes the cost of organizing excessive, especially in the face of emploeyr resistance. Many unions choose not to organize undocumented workers after weighing the alternatives. Due to the lack of legal protection and union hesitancy, undocumented workers are also cautious, and thereby appear that they can't be unionized. It is not that they can't be organized, it is that the obstacles are formidable. Thus, the basis for unionization, or the lack of a union, is unrelated to the extent of undocumented workers in a place of employment.

Secondly, the size of employment was shown to be statistically insignificant. In two studies, more than 50% of the firms observed to employ undoucmented workers were composed to 25 or fewer employees.[7] However, these studies did not compare firm size to the percent of undocumented workers, nor did they differentiate employment patterns among industrial sectors. What is suggested in this analysis is that the size of a manufacturing firms is not correlated with the percent of undocumented workers, though further research on both size and unionization would provide further insight into both situations.

Overview of the Workers

Because this research was based on individual firms and workers within firms, it provided an opportunity to develop a comparison among workers with respect to individual characteristics. The two initial areas of study are average wages and average time on the job in light of the workers' citizenship, race, sex, and union status. This information is displayed in Tables 5.8 through 5.12. (See Appendix 2 for a complete outline of this data by company.)

Table 5.8 illustrates several consistent trends. Taken as a whole, men earn more than women; citizens earn more than greencard holders, who in turn earn more than undocumented workers; and unionized workers earn more than non-unionized. In these cases, those receiving higher wages had also been employed longer on average suggesting either higher turnover among the lower paying groups, or more recent entry into the job market, or both. The racial picture is unusual. Blacks have the highest average wage, followed by Anglos, Latinos, and Other (e.g., Asians, Native Americans), although the wage structure corresponds with the average years on the job. The plants studied were predominantly Latino, leaving a smaller sample of the other groups, but the data suggests that Latinos and Others tended to hold lower paid jobs.

Analysis of Table 5.9, which arrays the data according to citizenship, provides added insight. Again, in all three categories (citizens, greencard holders, undocumented), men earn more than women, though their wages decrease with each category respectively. Average length of employment varies in correspondance with the average wage. The racial data is more complicated. Latino citizens have the highest wage followed by Blacks, Anglos, and Others, which is supported by the average years of employment except for the Other category, which had the longest tenure. Among greencard holders, the highest to

Table 5.8

Average Wages and Years on the Job of Workers by Citizenship, Race, Sex, and Union Status

	N	Average Wage	Standard Deviation	Average Years	Standard Deviation
All cases:	2,321	$6.70	2.76	6.40	6.14
Sex					
Males:	2,183	$6.79	2.78	6.54	6.24
Females:	138	$5.14	1.91	4.26	3.71
Citizenship					
Citizens:	758	$9.02	2.21	10.69	7.18
Greencarders:	557	$7.07	2.79	6.40	5.58
Undocumented:	1,006	$4.74	1.29	3.17	2.59
Race					
Anglos:	254	$8.72	2.32	9.98	7.30
Blacks:	125	$8.90	2.08	10.62	7.11
Latinos:	1,893	$6.31	2.68	5.70	5.61
Others:	49	$5.61	2.20	3.95	5.50
Union					
Unionized:	1,673 (13 firms)	$7.20	2.96	7.19	6.81
Non-unionized:	648 (8 firms)	$5.39	1.51	4.35	3.08

Table 5.9

Average Wages and Years on the Job of Workers by Citizenship

	N	Average Wage	Standard Deviation	Average Years	Standard Deviation
• CITIZENS					
All cases:	758	$9.02	2.21	10.69	7.18
Sex					
Males:	733	$9.06	2.19	10.83	7.20
Females:	25	$7.80	2.45	6.66	5.25
Race					
Anglos:	215	$8.81	2.28	10.21	7.52
Blacks:	122	$8.94	2.03	10.82	7.08
Latinos:	413	$9.17	2.21	10.88	7.04
Other:	8	$8.00	2.57	11.77	6.74
• GREENCARDERS					
All cases:	557	$7.07	2.79	6.40	5.58
Sex					
Males:	519	$7.22	2.81	6.51	5.68
Females:	38	$5.09	1.43	4.91	3.70
Race					
Anglos:	24	$9.12	2.43	11.33	5.93
Blacks:	2	$8.74	4.04	4.00	1.41
Latinos:	490	$7.13	2.78	6.50	5.48
Other:	41	$5.15	1.82	2.42	3.71
• UNDOCUMENTED					
All cases:	1,006	$4.74	1.29	3.17	2.59
Sex					
Males:	931	$4.78	1.31	3.17	2.59
Females:	75	$4.27	0.79	3.13	2.49
Race					
Anglos:	15	$6.89	1.99	4.47	1.91
Blacks:	1	$4.25	.	0.50	.
Latinos:	990	$4.71	1.25	3.15	2.59
Other:	-	-	-	-	-

Table 5.10

Average Wages and Years on the Job of Workers by Race

	N	Average Wage	Standard Deviation	Average Years	Standard Deviation
• ANGLOS					
All cases:	254	$8.72	2.32	9.98	7.30
Sex					
Males:	250	$8.75	2.29	10.00	7.33
Females:	4	$6.91	3.48	8.75	5.38
Citizenship					
Citizens:	215	$8.81	2.28	10.21	7.52
Greencarders:	24	$9.12	2.43	11.33	5.93
Undocumented:	15	$6.89	1.99	4.47	1.91
• BLACKS					
All cases:	125	$8.90	2.08	10.62	7.11
Sex					
Males:	118	$8.89	2.06	10.78	7.14
Females:	7	$9.13	2.58	7.92	6.49
Citizenship:					
Citizens:	122	$8.94	2.03	10.82	7.08
Greencarders:	2	$8.74	4.04	4.00	1.41
Undocumented:	1	$4.25	.	0.50	.
• LATINOS					
All cases:	1,893	$6.31	2.68	5.70	5.61
Sex					
Males:	1,775	$6.40	2.71	5.82	5.72
Females:	118	$4.88	1.45	4.02	3.25
Citizenship					
Citizens:	413	$9.17	2.21	10.88	7.04
Greencarders:	490	$7.13	2.78	6.50	5.48
Undocumented:	990	$4.71	1.25	3.15	2.59
• OTHERS					
All cases:	49	$5.61	2.20	3.95	5.50
Sex					
Males:	40	$5.85	2.14	4.25	5.84
Females:	9	$4.56	2.28	2.58	3.64
Citizenship					
Citizens:	8	$8.00	2.57	11.77	6.74
Greencarders	41	$5.15	1.82	2.42	3.71
Undocumented	-	-	-	-	-

lowest wages were earned by Anglos, Blacks, Latinos, and Others, respectively, though Latinos had more years on the job than Blacks. For the undocumented, the order was Anglos, Latinos, and Blacks, corresponding with their job tenure. This suggests that Latino citizens tend to be paid quite well relative to other racial groups, and have longer time on the job. In contrast, immigrant Latinos are paid less than other groups and have less job tenure. Again, this could reflect either greater job turnover, more recent entry into the laborforce, or both by the immigrants.

A correlation analysis was applied to the variables hourly wage and time on the job for each worker based on their citizenship. The purpose was to mesure the strength of the relationship between the two variables through a correlation coefficient. As shown in Table A, the variables are positively correlated, but the relationship weakens slightly among the greencard holders and the undocumented.

Table A

Correlation Between Hourly Wage and Time on the Job by Citizenship

Category	Correlation Coefficient	N
All	0.65	2,321
Citizens	0.65	758
Greencard	0.46	557
Undocumented	0.47	1,006

Table 5.11, Average Wages and Years on the Job by Sex, supports the previous findings. Lastly, Table 5.12, summarizing the data with respect to union status indicates that in the aggregate, unionized workers have both higher

Table 5.11

Average Wages and Years on the Job of Workers by Sex

	N	Average Wage	Standard Deviation	Average Years	Standard Deviation
• MEN					
All cases:	2,183	$6.79	2.78	6.54	6.24
Citizenship					
Citizens:	733	$9.06	2.19	10.83	7.20
Greencarders:	519	$7.22	2.81	6.51	5.68
Undocumented:	931	$4.78	1.31	3.17	2.60
Race					
Anglos:	250	$8.75	2.29	10.00	7.33
Blacks:	118	$8.89	2.06	10.78	7.14
Latinos:	1,775	$6.40	2.71	5.82	5.72
Others:	40	$5.85	2.14	4.25	5.84
• WOMEN					
All cases:	138	$5.14	1.91	4.26	3.71
Citizenship					
Citizens:	25	$7.80	2.45	6.66	5.25
Greencarders:	38	$5.09	1.43	4.91	3.70
Undocumented:	75	$4.27	0.79	3.13	2.49
Race					
Anglos:	4	$6.91	3.48	8.75	5.38
Blacks:	7	$9.13	2.58	7.92	6.49
Latinos:	118	$4.88	1.45	4.02	3.25
Others:	9	$4.56	2.28	2.58	3.64

Table 5.12

Average Wages and Years on the Job of Workers by Union Status

	N	Average Wage	Standard Deviation	Average Years	Standard Deviation
• UNIONIZED FIRMS					
All cases	1,673	$7.20	2.96	7.19	6.81
Sex					
Males:	1,590	$7.29	2.97	7.33	6.88
Females:	83	$5.53	2.23	4.48	4.46
Citizenship					
Citizens:	610	$9.59	2.02	11.93	7.21
Greencarders:	419	$7.45	3.08	6.67	6.13
Undocumented:	644	$4.78	1.21	3.05	2.87
Race					
Anglos:	178	$9.57	2.20	11.54	7.61
Blacks:	122	$8.92	2.09	10.80	7.11
Latinos:	1,332	$6.78	2.92	6.40	6.36
Others:	41	$5.43	2.33	3.37	5.15
• NON-UNIONIZED FIRMS					
All cases:	648	$5.39	1.51	4.35	3.08
Sex					
Males:	593	$5.47	1.53	4.39	3.16
Females:	55	$4.55	1.07	3.93	2.13
Citizenship					
Citizens:	148	$6.65	1.10	5.60	4.16
Greencarders:	138	$5.93	0.96	5.58	3.24
Undocumented:	362	$4.68	1.41	3.38	1.96
Race					
Anglos:	76	$6.75	1.05	6.32	4.85
Blacks:	3	$8.28	1.54	3.67	2.31
Latinos:	561	$5.18	1.45	4.05	2.56
Other:	8	$6.57	1.05	6.91	6.63

average wages, and more time on the job indicating either that the non-unionized plants have higher turnover, or are newer firms. In this sample, men again earned more than women in both instances, and had been employed longer. The same pattern of wage and tenure distribution evident previously for workers based on citizenship was repeated in unionized and non-unionzed firms. However, the racial pattern was mixed. In unionized plants, the highest paid were Anglos, followed by Blacks, Latinos, and Others (supported by comparable time on the job). But in non-unionized plants, Blacks were paid the most, followed by Anglos, Others and Latinos (though Blacks had the least tenure, and those in the Other category had been employed the longest).

The unusual racial patterns that emerged repeatedly are particularly interesting. First, national income data indicates that Chicanos (Mexican descendant, U.S. born citizens) earn less than whites, but more than Blacks (this relationship holds for families, male wage earners, and female wage earners.)[8] However the introduction of citizenship reverses the order for Blacks and Latinos in this study. Secondly, previous studies have found that racial groups will sometimes be separated by establishments, or within job sites, by departments or occupations (e.g., production vs. supervisory roles).[9] Here, the situation is again further complicated by the introduction of citizenship status. Within a plant that is predominantly Latino, citizen Latinos hold preferred positions. In a plant with mixed races, citizen groups of all races tend to have the better jobs (with Latinos earning the most), while Latino undocumented and greencard holders are less well off than their counterparts of other races. Since Latinos comprised 82% of the workers studied, comparison with other sites employing workers of other races differentiated by citizenship would be valuable. This is extremely difficult to come by since large numbers of undocumented persons of other races appear to

work in mono-racial job sites, or enclave industries.[10] The issue differs from one of the discrimination based on race because undocumented workers have unequal personal attributes (i.e., undocumented workers have presumably less job experience, are risky employees in that they are "illegal," and often have poor command of English). Rather, it is a matter of job allocation creating a de-facto segregation among workers based on citizenship and race; a situation that works against those who do not (or can not) regularize their status, and who are further subjected to frequent job turnover (and cannot establish seniority).

Wage Allocation Among Workers

From the overview of the workers, it is evident that knowing a worker's personal attributes, in light of job characteristics, one could assign him or her a probable wage. Given key information on a firm (since the type of labor demanded reflects the economic well-being of a firm, and the production technology employed), a worker's hypothetical wage is further defined. Drawing on firm and worker data established through this study, a regression was developed to learn how the workers' personal backgrounds, their job type and tenure, and the firms' corporate status were related to the wages paid.

In this regression (Model II), hourly wage was the dependent variable. The personal characteristics included sex, citizenship, and race. Employment factors were the jobs held by the workers, and the years they were on the job. Corporate status was represented by unionization, ownership (subsidiary or independent), and size of firm employment. It was expected that hourly wages would be higher on average for males, citizens, and Anglos; with increases in a worker's occupational prestige (as determined by the Treiman scale),[11] and time on the job; and in unionized, subsidiary, large firms (a proxy for corporate strength). The regression

analysis showed that although the signs to the variables fit the initial theory, one variable, occupation, was not statistically significant.

In order to explain hourly wages, the following variables were selected:

Male (S)	=	1 for males, 0 for females
Citizens (C_1)	=	1 for citizens, 0 for others
Greencarders (C_2)*	=	1 for greencard holders, 0 for others
Undocumented (C_3)	=	1 for undocumented, 0 for others
Anglos (R_1)	=	1 for Anglos, 0 for others
Blacks and Other (R_2)*	=	1 for Blacks and Other, 0 for others
Latinos (R_3)	=	1 for Latinos, 0 for others
Time (T)	=	years on the job
Union (U)	=	1 for unionized, 0 for non-unionized (for each worker)
Subsidiary (Sub)	=	1 for subsidiaries, 0 for independent (for each worker)
Size	=	actual size of firm (employment) (for each worker)

*--these variables were assumed in the intercept

By comparing the standardized coefficients, the conclusion can be made that the variable contributing the most to hourly wages is time on the job (T), followed by the variable indicating whether or not a worker is undocumented (C_3). 63% of the variation in hourly wages of the sample selected is explained as a function of a worker's sex, citizenship, race, time on the job, and of the firm size and status (unionized or not, subsidiary or independent).

As an application of this model that tested the concept of job stratification, the hourly wages of two people were predicted: a male, citizen, Anglo who has been in a unionized subisidary firm of the mean size for the mean number of years, versus a worker who is a Latino and undocumented with all of the other characteristics staying the same. The comparison shows the citizen Anglo making $2.96 more per hour.

Analysis of Occupations

From this analysis, it appears that occupations, per se, are less important in determining wage levels than such factors as citizenship, race, or time on the job. Though occupations were not significant in the regression, they are nonetheless interesting. There were 45 occupations identified in the 21 firms (classified according to the 1970 Census Standard Occupational Codes). Fifty-eight percent of all the workers were clustered in 6 occupations (mechanics, assemblers, welders, machine operators, machine operators not specified, and laborers). Undocumented workers were most concentrated as assemblers and welders. In each of these occupations, citizenship and years on the job corresponded with the wage paid. On average, undocumented workers received half of the hourly wage paid to citizens, though they had been employed one quarter the period of time. In all likelihood, undocumented workers, being less senior, were allocated entry level positions, while citizens and greencard holders moved into better jobs within the same occupation. Undocumented workers were prominent in jobs that require little skill (e.g., assemblers), though they also held skilled positions (e.g., mechanics, welder), illustrating that their usefulness to employers was not exclusive to the least desirable jobs. Table 5.15 shows the citizenship breakdown for the six occupations.

When average wage earned in the six occupations are contrasted with national data, three occupations fall above the national average, and three below. The two occupations with the greatest number of undocumented workers, assemblers and machine operators, are below the national average, again suggestive of a wage "depressant effect." Table 5.16 compares the various wage levels.

Table 5.13

Model II Results[12]

Dependent variable = Hourly Wages (HOURLY)

Mean = $6.70

R^2 = .63

N = 2,321 workers

Variable	Mean	Slope	t-ratio	P	Standardized Coefficient	Standard Error
b_o (intercept)	--	4.02	19.08	*	0	0.211
S	0.94	0.69	4.61	*	0.06	0.149
C_1	0.33	0.85	7.83	*	0.14	0.108
C_3	0.43	-1.79	-19.12	*	-0.32	0.094
R_1	0.11	0.81	4.80	*	0.09	0.170
R_3	0.82	0.49	3.41	**	0.07	0.144
T	6.40	0.15	18.12	*	0.34	0.083
U	0.72	0.39	4.38	*	0.06	0.090
Sub	0.68	0.98	10.88	*	0.17	0.090
Size	639.14	0.0002	3.02	***	0.06	0.00007

* - probability of result due to chance smaller than 0.0001

** - probability of result due to chance smaller than 0.0006

*** - probability of result due to chance smaller than 0.0026

Thus, the final regression for Model II is:

$$HOURLY = 4.02 + 0.69S + 0.85C_1 - 1.79C_3 + 0.81R_1 + 0.49R_3 + 0.15T + 0.39U + 0.98Sub + 0.0002Size$$

Table 5.14

A Comparison of Two Workers

Variable	Citizen Anglo	Undocumented Latino
b_o (intercept)	$4.02	$4.02
S	.69	.69
C_1	.85	--
C_3	--	-1.79
R_1	.81	--
R_3	--	.49
T (6.40 x .15)	.96	.96
U	.39	.39
Sub	.98	.98
Size (639.14 x .0002)	.13	.13
	$8.83	$5.87

Table 5.15

Average Wages and Average Years on the Job for
Six Occupations by Citizenship

	Citizen			Greencard			Undocumented			Total		
Occupational Code*	N	Wage ($)	Years	N	Wage ($)	Years	N	Wage ($)	Years	N	Wage ($)	Years
492	84	9.67	14.47	44	9.05	14.09	57	7.26	4.40	185	8.78	11.28
602	105	7.95	9.79	72	5.12	4.19	153	4.38	3.01	330	5.68	5.43
680	205	10.27	14.53	76	8.24	9.13	69	5.03	3.07	350	8.80	11.10
690	29	8.03	7.84	38	7.16	4.99	122	4.67	2.72	189	5.69	3.97
692	15	6.85	3.61	46	4.47	2.85	46	4.11	2.27	107	4.65	2.71
780	83	9.29	10.85	58	9.13	6.06	52	4.37	2.85	193	7.92	7.26
Total	521	9.33	12.29	334	7.19	6.85	499	4.84	3.02	1354	7.15	7.54

* 492 Mechanics; 602 Assemblers; 680 Welders; 690 Machine Operators; 692 Machine Operators (not specified; 780 Laborers.

Table 5.16

Average Hourly Wages in Six Occupations for the Nation and in the 21 Firms Studied (1981)

Occupation	National Average Wage ($)[13]	Firm Average Wage ($)
(492) Mechanics	8.15	8.78
(602) Assemblers	6.05	5.68
(680) Welders	8.30	8.80
(690) Machine Operators	6.82	5.69
(692) Machine Operators, not specified	6.27	4.65
(780) Laborers	7.42	7.92

At the plant level, occupational detail shows how jobs are distributed in light of the employment of undocumented workers. In firms with few or no undocumented workers, the average wage for an occupation was consistently higher than in firms with high percentages of undocumented. For example, in the six case study firms (which contained 28 occupations), only Companies F and G (batteries) had no undocumented workers. As shown in Graph I, they were also paid considerably more by occupation than the other six firms, all of whom employed undocumented workers. Graph II illustrates the average length of employment associated with each occupation. A list of the occupations is found below. The complete breakdown of the occupations by wage, years on the job, and citizenship for the case study firms is contained in Appendix 3. Appendix 4 shows this data for all 21 firms.

Summary

The statistical analsyis demonstrates the necessity for further studies on the employment effects of undocumented workers to better understand the conditions of work, especially during periods of change. In particular, these findings underscore the importance of the methodology used in this research for developing industry profiles. In this instance, the case study approach yielded detailed insight, but the regressions enriched the data with a high level of statistical reliability.

As shown in the regressions, it is possible to estimate characteristics of firms in basic manufacturing that employed undocumented workers during the recent period of rapid transformation, as well as the process of wage allocation among workers based on citizenship within the firms. Though in the aggregate, the firms exhibited a wage differential that correlated with the citizenship of the workforce, detailed observations revealed a picture complicated by other factors, such as race, sex, occupation, and most prominantly, length of employment. Furthermore, wage was only one key predictor of the tendency for firms to employ undocumented workers. Another important variable was the extent of labor turnover, or lack of employment stability in a workforce.

The consistency of characteristics common to employers of undocumented workers, and of wage patterns within these firms with respect to citizenship illustrates the pervasiveness of these findings in the region. It would be tempting to dismiss the findings as applicable only to Los Angeles due to its proximity to an international border. However, other major industrial cities, such as Chicago and New York, also have significant concentrations of undocumented workers, and it is likely that these trends would appear elsewhere, though in modified form. From this perspective, the findings should be understood as integral to the process of industrial restructuring, in that the underlying practices provided a temporary

advantage to those regions and firms that utilize undocumented workers. This advantage could change, however, with new directions in national immigration, urban, or industrial policies. The following chapter will address major policies under consideration in light of the transitional role of undocumented workers in manfuacturing.

Chapter 5 Notes

1. U.S. Department of Labor. Supplement to Employment and Earnings, Revised Establishment Data, Bureau of Labor Statistics, Washington, D.C., August 1981.

2. The original parameter estimates with the two insignificant variables were as follows (union = 1 yes, 0 no; size refers to actual employment of firm):

Variable	Mean	Slope	t-ratio	Standardized Coefficient	Standard Error
intercept	--	0.98	63.21	0	0.016
Hourly	6.70	-0.10	-48.14	-0.812	0.002
Sub	0.66	0.06	5.80	0.087	0.010
Time	6.40	-0.004	- 3.64	-0.067	0.001
EV	0.36	0.21	8.10	0.105	0.026
Union	0.72	0.004	(0.37)	0.005	0.010
Size	639.14	0.000006	(0.80)	0.014	0.000008

The correlation matrix for this regression was:

	PUNDOC	Hourly	Sub	Time	EV	U	Size
PUNDOC	1.00						
Hourly	-0.81	1.00					
Sub	-0.25	0.37	1.00				
Time	-0.55	0.65	0.22	1.00			
EV	0.03	0.06	-0.20	0.10	1.00		
U	-0.24	9.29	0.44	0.21	-0.31	1.00	
Size	-0.41	0.52	0.45	0.65	-0.02	0.35	1.00

The correlation matrix for Model I is as follows:

	PUNDOC	Hourly	Time	Sub	EV
PUNDOC	1.00				
Hourly	-0.81	1.00			
Time	-0.55	0.65	1.00		
Sub	-0.25	0.39	0.22	1.00	
EV	0.03	0.06	0.10	-0.20	1.00

3. See Arthur Hochner and Daniel Zibman, "Plant Closings and Job Loss in Philadelphia--The Role of Multinationals and Absentee Control," manuscript, Philadelphia, Temple University, 1981; and David Barkley, "Plant Ownership Characteristics and the Locational Stability of Rural Iowa Manufacturers," Land Economics, Vol. 54, No. 1, February 1978, p. 92-99.

4. Wayne A. Cornelius, "The Future of Mexican Immigrants in California: A New Perspective for Public Policy," Working Papers Center for United States-Mexican Studies, University of California, San Diego, No. 6, 1981.

5. David S. North and Marion F. Houstoun, The Characteristics and Role of Illegal Aliens in the U.S. Labor Market: An Exploratory Study, Litton and Co., Inc., Washington, D.C., March 1976, p. 124-126.

6. Rebecca Morales, "Unions and Undocumented Workers," Southwest Economy and Society, Winter 1982.

7. Gilbert Cardenas, Manpower Impact and Problems of Mexican Illegal Aliens in an Urban Labor Market, University of Illinois Center for Advanced Computations, December 1976 (sample size = 74); and Wayne A. Cornelius, "Illegal Migration to the United States: Recent Research Findings, Policy Implications and Research Priorities," M.I.T. Migration Study Group, May 1977 (sample size = 994).

8. See Walter Fogel, "Research on the Chicago Worker," The State of Chicano Research in Family, Labor and Migration Studies, Armando Valdez, Albert Camarillo, and Tomas Almaguer (eds.), Stanford, Stanford Center for Chicano Research, 1983.

9. See for example, Robert Howard, "Second Class in Silicon Valley," Working Papers, September/October 1981; or Alan Bernstein, Bob DeGrasse, Rachel Grossman, Chris Paine, and Lenny Siegel, "Silicon Valley: Paradise or Paradox," in Mexican Women in the United States: Struggles Past and Present, Magdelena Mora and Adelaida R. del Castillo (eds.), Los Angeles, Chicago Studies Research Center, University of California, 1980; or Kenneth T. Arrow, "Models of Job Discrimination," in Racial Discrimination in Economic Life, Anthony Pascal (ed.), Lexington, Mass., Lexington Books, 1972.

10. See, Alejandro Portes, "Modes of Structural Incorporation and Present Theories of Labor Immigration," in Global Trends in Migration: Theory and Research on International Population Movements, Mary M. Kritz, Charles B. Keely, and Silvano M. Tomasi (eds.), New York, Center for Migration Studies, 1981.

11. Donald T. Treiman, Occupational Prestige in Comparative Perspective, New York, Academic Press, 1977. The structural theory of prestige determination argues that the division of labor creates inherent differences in power associated with various occupational roles based on education and income. The prestige scale, though biased in that it reflects a class-based concept of presitge, was applied because it weights occupations for regression analysis.

12. The original parameter estimates with the one insignificant variable were as follows (Occw = occupations scaled to the Treiman scale):

Variable	Mean	Slope	t-ratio	Standardized Coefficient	Standard Error
intercept	--	3.78	14.81	0	0.255
S	0.94	0.69	4.55	0.059	0.152
C_1	0.33	0.86	7.92	0.146	0.109
C_3	0.43	-1.81	-19.20	-0.324	0.094
R_1	0.11	0.79	4.69	0.090	0.169
R_3	0.82	0.50	3.48	0.070	0.144
U	0.72	0.40	4.46	0.065	0.090
Sub	0.67	0.97	10.76	0.166	0.090
Size	641.42	0.0002	2.87	0.054	0.00007
Time	6.41	0.15	17.91	0.333	0.008
Occw	33.90	0.007	(1.54)	0.020	0.005

The correlation matrix for this regression was:

	Hourly	S	C_1	C_3	R_1	R_3	U	Sub	Size	Time	Occw
Hourly	1.00										
S	0.14	1.00									
C_1	0.59	0.08	1.00								
C_3	-0.62	-0.06	-0.61	1.00							
R_1	0.26	0.06	0.39	-0.26	1.00						
R_3	-0.30	-0.03	-0.49	0.38	-0.74	1.00					
U	0.29	0.07	0.13	-0.16	-0.02	-0.08	1.00				
Sub	0.39	0.08	0.26	-0.17	-0.01	-0.06	0.44	1.00			
Size	0.52	0.05	0.40	-0.27	0.10	-0.15	9.35	0.45	1.00		
Time	0.65	0.09	0.49	-0.46	0.20	-0.24	0.21	0.22	0.65	1.00	
Occw	0.13	0.12	0.10	-0.06	0.06	-0.05	-0.04	0.05	0.18	0.16	1.00

The correlation matrix for Model II is as follows:

	Hourly	S	C_1	C_3	R_1	R_3	T	U	Sub	Size
HOURLY	1.00									
S	0.14	1.00								
C_1	0.58	0.08	1.00							
C_3	-0.62	-0.06	-0.61	1.00						
R_1	0.26	0.06	0.39	-0.26	1.00					
R_3	-0.30	-0.03	-0.49	0.38	-0.74	1.00				
T	0.65	0.09	0.49	-0.46	0.20	-0.24	1.00			
U	0.29	0.07	0.13	-0.16	-0.02	-0.08	0.21	1.00		
Sub	0.39	0.08	0.26	-0.17	-0.01	-0.06	0.22	0.44	1.00	
Size	0.52	0.05	0.40	-0.27	0.10	-0.15	0.65	0.35	0.45	1.00

13. Nancy F. Rytina, "Earnings of Women and Men: A Look at Specific Occupations," Monthly Labor Review, U.S. Department of Labor, Vol. 105, No. 4, April 1982, p.25-31. Weekly earnings were divided by 40 hours per week to estimate hourly wages.

CHAPTER 6

IMMIGRANTS AND NATIONAL POLICIES: INTENTS AND POTENTIAL OUTCOMES

Introduction

From one perspective, the economic of crisis is over. Acccording to a recent account, the nation's economy had reportedly stabilized at a growth rate of 7%, prices were projected to increase at a low inflationary annual rate of 3.8%, second quarter corporate profits had grown by 17.6%, and the gross national product for 1983 was projected to increase 5.5% by the end of 1983.[1] At the same time growth statistics were cited came a reference to immigrant workers: "Because the workforce grows every year, fed by a stream of new American workers entering the labor market and by immigrants entering the country, the gross national product must expand by 3% simply to keep the employment level stable. A growth rate of greater than 3% is required to reduce the numbers of Americans out of work, now numbering about 10.7 million."[2] Though it is troubling to see immigrants liked to the economy in a way that appeals to nativist arguments, the objective association is nevertheless valid. It is also reasonable to claim that the economy is turning around. However, it is essential to note that the employment of immigrants and the economic recovery have been happening together, they have not been discrete events with one cancelling out the benefits created by the other. But now that the economy has stabilized, the transitional role once performed by undocumented and other immigrant workers may become less important, though other immigrant roles are emerging as the new economic order takes definition. The findings of this research provide insight into the way the global economy is

shaping and being shaped by local labor market conditions. Consequently, it is of relevance for public policy. Thus, this section will summarize the salient points of the research, and relate them to policies of current national debate.

The Transitional Period in Retrospect

Throughout the text, the argument has been made that undocumented workers were significant during a period of transition. The transition refers to the change between periods of capitalist structural forms. The current period has been termed global capitalism. What is being witnessed is the breakdown of this system and the evolution into one that is not yet defined. During the transition, undocumented workers functioned as a latent reserve laborforce within basic manufacturing. Thus, they helped to usher in a new capitalist period at the same time that they were instrumental in the transformation of manufacturing. So while the concept of a latent reserve labor can be applied solely to a sectoral context, in this instance, it was actually more far reaching.

Implicit in this analysis is the notion that society reflects fundamental work relations embodied in the labor process. Earlier, the labor process was defined as the way in which labor is used in the orgranization of work so as to control production. Under the previous period of monopoly capitalism, the labor process was described as consisting of Taylorism and Fordism. Because the labor process defines the way in which production is structured, and therefore is the basis for the wage relationship underlying economic and social institutions supporting working class consumption, Fordism became another term to describe the period. In its broadest sense, Fordism referred to a society organized around Taylorist and Fordist principles, generalized mechanization, mass production, and macro economic policies directed at welfare economics. Monopoly capitalism later gave way to global capitalism, where the labor process was characterized as Neo-

Fordism. Here the term refers to a more spatially dissaggregated concept of production which has been described as consisting of:

> (a) further reductions in skill content and control over work by workers through the use of electronic information systems and computer programming; (b) the increasing breakdown and dispersal of functions that had previously been carried out under one roof into multiple locations (epitomized in the production of the "World Car"); and (c) the intensified fragmentation of tasks outside direct production in management and control functions, technical design, research and development, and the full range of supportive production services. These changes have been associated with an intensification of capital mobility as a strategy for increasing both profits and labor control.[3]

The labor processes underlying the periods of monopoly and global capitalism reflect times in the history of capitalism when basic manufacturing was the driving force for the rest of the economy. During monopoly capitalism, the labor processes were associated with the factory setting of the industrial revolution. Later, under global capitalism, the labor process termed Neo-Fordism referred to the organization of production in ways that disregarded spatial boundaries. The new period appears to be very different since services are now the primary force behind the economy, thus the labor process reflects a very different set of relations.

Though the transitional period is not yet complete, there are some interesting observations that bring the emerging labor process into focus. First is the work by Stanback and Noyelle in which they chart the rise of the service sector and make distinctions among distributive, producer and final output services. In Noyelle's words, the rise of services indicates "...that although the United States has remained very much a goods-oriented society, it is an economy in which service activities have come to play a very important role, partly because of their complementarity to final goods, partly because of the need to deal with the increasing complexity and size of firms and markets, and partly because direct production of goods for domestic consumption is increasingly carried out

abroad...these trends reflect the dual transformation undergone by the U.S. economy during the most recent decades--a transformation in what the economy produces and in how it produces."[4] The how, according to Stanback and Noyelle, is through a new dual economy, both in terms of labor market segmentation, that is a structural dualism, and geographically, among nations and at the intra- and intermetropolitan level.

The recent research of Michael Storper and Susan Christopherson sheds further light on the emerging organization of economic activity. Their analysis of the motion picture industry depicts a situation where virtually every step of production and nearly every person employed is on a contractual arrangement.[5] Though the motion picture industry exemplifies an extreme case, other industries such as garment, electronics, and to some degree, auto are increasingly subcontracting out rationalized work to firms employing the most vulverable labor. This tendency to transfer risks to the most powerless segments of society was described by Peter Marris in his book, Loss and Change, in which he notes that the trend prevades all aspects of society, not merely the workplace.[6]

These observations regarding the new dualism, the contracted society, and the transference of societal risks adds another dimension to the research on the automobile industry and its use of undocumented workers as transitional labor presented here. The points that surfaced through the research can be viewed as pertaining to: (1) the transformation of the automobile industry; (2) the structure of labor markets and employment; and (3) the spatial implications of the changing organization of work. These subjects will be addressed in the order listed above.

The automobile industry illustrates several significant trends. Industrial restructuring among the parts producers often involved a strategy for survival that included the employment of undocumented workers. This was a short-term solution

until they could later mechanize, move to foreign sites, or take other measures to make themselves competitive. In the process, a circuit was being established, particularly with Mexico, but also with other developing nations, and the U.S. during this period. As undocumented Mexican workers were being absorbed into good paying and often unionized jobs in basic manufacturing in the U.S., U.S. manufacturers were, in turn, moving production to Mexico, and when possible, automating as well.[7] Some have called this the importation of labor and export of capital.

The long term tendency for capital to move coupled with automation has generated considerable debate over future directions in the U.S. Of concern here is whether capital mobility from the U.S. to Mexico will continue to be accompanied by automation, or whether producers will tend to reconcentrate in the U.S., adopt a method employed by the Japanese of using inventories "just in time" (kanban), and automate in the process. Moving to Mexico requires extensive capital outlay and trust in the stability of the government. Yet, many firms from the most sophisticated (i.e., assemblies, and producers of engines) to those that make relatively peripheral products (i.e., headers) are beginning to automate and move, with an eye towards selling in the U.S. market. Among the parts producers, the competitors left behind must also automate, or engage in other cost cutting practices, such as operating as sweatshops. As a result, parts producers are beginning to adopt characteristics of both the corporate giants on the one hand, and sweatshops on the other. This unusual industrial pattern is actually in keeping with the general trends just identified, that is, with extreme contractual arrangements dependent on transferring work to the most vulnerable workers. It is a situation created by capital but made possible by the availability of undocumented labor.

The research also demonstrated some important points with respect to labor market and employment trends. It was repeatedly illustrated that the functions performed by undocumented and immigrant workers are more complex than simply filling the lowest jobs. The contention here is that they fill three types of positions: those that facilitate changes in production technology, especially among declining industries; those that support the qualitatively new employment base surfacing at the urban centers; and those that have traditionally reinforced peripheralized immigrant industries. These distinctions are important because they imply different short-term and long-run effects on urban labor markets, and among the various sectors.

Viewed in broad terms the aggregate effect of the employment of undocumented workers, coupled with the direction already assumed by the economy, is a downward pressure on working class wages, and a breakdown of working class consumption. Caught in a difficult spiral, workers have been taking lower paying jobs only to be able to buy less which means producers confront a shrinking market that leads them to reduce costs of production, such as through the wage bill. The undocumented transitional workers are only one piece in this scenario, but they embody all of the significant elements needed by employers till market pressures force them to take more permanent solutions, such as engaging in overseas produciton, automating or taking the direction of sweatshops.

This, in turn, leads to the third point. The spatial arrangement of economic activities is one that reflects the locational choices and mobility of capital, the structure of labor markets, institutional constraints, and the limitations of the build environment. Looking selectively at the significance of the employment structure, the major centers of economic activity in the U.S. have been distinguished by Stanback, Noyelle and others by the growing numbers of low-wage

jobs. These jobs, by definition, are generally unstable and lead to low job attachment. This implies that the characteristics associated with immigrants and undocumented workers will have to be assumed by a broader population if they are to be employed. Ultimately, this could also lead to a more mobile laborforce, in essence a counterpart to the concept of capital mobility. Thus, the spatial "fix" of economic activities may become more fluid in the future.

These observations regarding industrial, labor market, and urban spatial trends suggest guidelines for analyzing public policy. To illustrate their significance, three public policy issues will be touched on briefly in light of the previous discussion. The focus will be on industrial, immigration, and urban policy, respectively. Each of these policies are intended to rectify employment disparities that have persisted despite signs of economic recovery.

Industrial Policy: National Solutions, Local Realities

During the 1980's, after production in entire industries, such as rubber, steel, and electrial appliances, was nearly gone from the U.S., and auto, among others, was seriously challenged by foreign competition, talk of the need for a concerted industrial policy re-emerged, reminiscent of the issues raised during the post-Depression reconstruction era. Industrial policy refers to stated or implied national efforts to stimulate economic growth by favoring some forms of business activity over others. Faced with a significant loss of productive capacity, many felt it was necessary to assess the economic trajectory we were headed on. For some, the call for strengthening the U.S. industrial base translated into a need for national planning, while others argued for greater state and local control.[8] Seen sectorally, ideological positions also centered around favoring growth sectors versus assisting industries in decline.[9] Inevitably, arguments also surfaced on both sides of the underlying trade issue: pursuing protectionist policies; or supporting a

further breakdown of trade barriers. Here, the focus will be on the implications of the "domestic content" bill, one element of an industrial policy intended to insulate U.S. manufacturers and workers from foreign competition.

"Domestic content" is the name given to legislation requiring a certain percentage of a good to be made by the workers in the country where the product is either produced or consumed. Many industrializing nations which are more a site of production than for final consumption will include stipulations regarding the amount of locally produced intermediate products that must go into the final good. In the U.S., the issue has been one of employment. Workers are beginning to demand that products sold in the U.S. demonstrate a commitment to keeping them employed. The proposed Fair Practices in Automobile Products Act of 1983 (HR 1234 and S707) illustrates how this would work.

The domestic content bill applies to all (U.S. and foreign) auto manufacturers selling more than 100,000 vehicles annually in the U.S. It sets a ratio of U.S. materials and labor on the components a company would have to use based on the number of vehicles sold over a four year period. At the end of four years, a company selling 100,000 cars would have to include 25 percent U.S. made parts, while a company with sales of over 500,00 would be comprised of 90 percent local content. The UAW and the AFL-CIO have argued that because auto was a highly linked industry in the U.S., this bill would effectively create a "ripple effect" throughout the economy. In his testimony before the Subcommittee on Trade of the Committee on Ways and Means, UAW President Douglas A. Fraser noted that in 1981, "the auto industry employed well over 700,00 auto workers and 1,650,000, supplier workers, for a total of 2.35 million jobs."[10] During that period, U.S. auto makers sold approximately three-quarters of the value of new cars and trucks sold in this country. Consequently, Fraser projected that: "In the absence of the local

content law, by the end of the decade U.S. automotive production as a share of the market can be expected to fall to about one-half of U.S. auto sales. A fall in U.S. production from three-quarters to one-half of the auto market would eliminate jobs of more than 200,000 auto workers--and 5.5 times that many outside the auto industry."[11]

However, the domestic content bill faces stiff resistence from the auto industry. In a study generated by the Massachusetts Institute of Technology's "Future of the Automobile Program," it was reported: "The high cost of transporting assembled vehicles helps to explain the predominance of the developed countries in the production of automobiles. The developed countries that produced 81% of the world's vehicles in 1980 also consumed about 74% of those vehicles. Or looked at another way, in 1978 only about 16% of the motor vehicles sold in the world were exported beyond their region of manufacture."[12] Foreign producers wanting access to this market have opened assembly plants in the U.S., while U.S. producers selectively out-sourced, taking into account labor and material costs, transportation, foreign exchange rates, and local content policies. Foreign local content laws have been particularly important especially where countries have adopted policies of allowing a higher level of imports in return for increased exports, often sweetened by tariff reductions.[13] By outsourcing more, they have been granted a larger share of these markets, and in the process, manufacture low cost parts. These parts have been allocated for production selectively around the globe: "For bulkier parts the nearest low wage country--Mexico--is favored. For more compact ones, the lowest wage locale--Korea--has the advantage."[14] By out-sourcing, U.S. manufacturers have been able to lower their labor costs, despite restrictions set by other countries, so they have stronger opposed enactment of any such legislation in the U.S.

Nevertheless, on the supposition a domestic content bill were enacted in the U.S., it is reasonable to assume that automation would increase in order to reduce labor costs, especially among the assemblers and parts producers that are subsidiaries of the auto makers, or that are unionized. Firms that remained labor intensive would find low-cost labor invaluable, consequently, sub-contracting to companies employing immigrant and undocumented workers could become even more prominent as a way to minimize production costs. The result would be perverse dichotomy spatially, with auto makers trying to consolidate operations in the U.S., and parts producers moving to immigrant sites (assuming labor is a sufficient cost to warrant the pull). Another split would occur within the industry; on the one hand, the trend toward automation would be accelerated, while on the other hand, would be shift towards immigrant labor (and perhaps sweatshops). In this situation, the immigrant worker could develop a more significant role in society first as transitional and later as highly exploited labor.

Immigration Legislation: Regulating the Supply of Labor

While one approach to stabilizing employment in the U.S. is to alter the conditions affecting the demand for labor (such as through a domestic content bill), another is to regulate the supply. This is one outcome of immigration legislation. Immigration policy reform has engendered a hotly contest debate that exends back to 1972. For over a decade, five interagency taskforces and one Congressional Commission, spanning the presidencies of Nixon, Ford, Carter, and Reagan, have investigated the issues. The proposed Immigration Reform and Control Act of 1983 (HR 1510 and S 529), commonly known as the Simpson-Mazzoli bill, captures the main points. The findings on undocumented workers generated by the research are particularly insightful here.

To briefly summarize the main points of Simpson-Mazzoli, if enacted, it would:

(1) Impose fines on employers and entities hiring, recruiting or referring for employment persons not authorized to work in the United States by Immigration and Naturalization Service...;

(2) Require the President, within three years of enactment of the law, to develop a "secure" system to determine workers' eligibility to be employed in the United States;

(3) Restructure the categories of immigrants who may lawfully enter the United States by establishing an overall annual immigration ceiling of 425,000. This system would include a new "independent" group of immigrants having access to 75,00 visas annually, and would abolish the ability of siblings of United States citizens to immigrant on the basis of their family relationships;

(4) Streamline the process of United States agricultural employers to obtain permission to import temporary foreign labor;

(5) Regularize the status of many undocumented immigrants by granting them either lawful permanent resident status or "temporary resident status" depending on the length of their residence in the United States; and

(6) Eliminate various procedural protections available to immigrants and refugees in INS administrative proceedings.[15]

The key features to employment pertain to: (a) employer sanctions; (b) a national identity card as the basis for employment; (c) the regularization of undocumented immigrants; and (d) the temporary worker program. The first item applies to all U.S. employers, the second to all U.S. workers, the third to undocumented workers wanting to remain in the U.S., and the fourth is sector specific and is intended only for agriculture. Here the discussion centers on the joint effect of the changing employment base and the role of undocumented workers in determining policy outcomes.

Employer sanctions refers to fines on employers of undocumented workers, and labor unions or other groups that recruit or assist in the employment of these workers. On the surface, this provision appears to have reasonable intentions: the

imposition of civil and criminal penalties on legal abusers. Twelve states and one city, including the state of California, have adopted employers sanctions laws, as have Canada, France, and Germany.[16] In all of these locations, this law has never been credited as an effective deterrent in illegal hirings. Reasons cited are that it is difficult to enforce, it has not been a high priority, or in the case of California, the "courts consistently reaffirmed the unconstitutionality of the law on the grounds that it constituted a violation of the federal preemption of immigration law and that it was ambiguous."[17] If it has been ineffective, why is it retained in national legislation? Kitty Calavita provides this analysis:

> On the one hand, undocumented workers are used ideologically as scapegoats; on the other, their labor is used as a critical component in America's increasingly troubled industries. The outcome is likely to be a symbolic law which, for the moment, "resolves" this dilemma, but which in fact solves nothing. The legislation is likely to be symbolic in two senses: it will serve as a symbolic validation of the immigrant-as-enemy myth; and it will remain a symbolic gesture, addressing political needs, but not altering at all the underlying economic reality.[18]

If national employer sanctions do eventually become enacted and are actively enforced, employers should respond in ways that reflect an assessment of their alternatives. For example, with undocumented workers driven further underground creating an extremely cheap labor pool, immigrant dependent industries based on subcontracting to sweatshops and homeworkers could proliferate. Aiternatively, other immigrant dependent firms could accelerate the trend towards internationalization and mechanization. A combination of both of these paths, that is, the employment of immigrants coupled with mechanization, has already surfaced, as evidenced through this research and that of hotels and fast food businesses in New York.[19] Lastly, a commonly held fear among immigration analysts is that urban employers could successfully make a case that they, too, need temporary foreign workers (guestworkers) if they are to remain in the U.S., a speculation based on the experience in agriculture.

Enforcement of employer sanctions would depend heavily on the establishment of a tamper-proof worker identity card. This proposal has been interpreted as an erosion of the civil rights of the entire U.S. laborforce (approximately 112 million persons), in order to prohibit less than 3 to 6 million people from entering the workforce. Civil libertarians and minority rights organizations argue this would infringe on rights to privacy, and could affect other rights, including the rights of assembly, speech, and association.[20] "As concluded by the United States Commission on Civil Rights, the great potential for infringement of privacy rights and the impact that this could have on the infringement of other rights strongly suggests that the national identity card proposal, if adopted, will merely exchange one problem for a different and more serious problem."[21] The effect of this provision would be greater control over labor in general, a valuable trade-off in the name of job creation. The irony of the situation is that many of the jobs working class people expect to gain in return for their loss of civil rights may be lost in the industrial transformation. On the other hand, firms that remain immigrant dependent could argue successfully for either enactment of a guestworker program or for urban enterprise zones, neither of which results in employment that meets the expectations of newly unemployed blue-collar workers.

Regularization of undocumented workers, sometimes termed "amnesty," would create two sub-categories of citizens: (1) those who entered prior to January 1, 1977, have resided in the U.S. continuously since that date, and qualify for a lawful immigrant status, and (2) those who entered between January 1, 1977 and January 1, 1980, and qualify for a "temporary residence" status.[22] Documentation required to support a person's eligibility for legalized status is argued to be more stringent than most undocumented people could meet, and would

inhibit them from stepping forward. Furthermore, during their period of residency, they would pay taxes, but would not have access to welfare, food stamps, federally assisted housing, and unemployment insurance. The result would be a second class citizen which in their desperate situation could easily be channelled into the latent and stagnant reserve labor force.

Lastly, the special temporary worker program for agriculture, though sector specific, has raised a considerable amount of concern. This proposal would "streamline" the existing H-2 Program; institute a Transitional Agriculture Program (TAP) which allocates visas to alien farmworkers in the first year to be phased out over three years and provide easier access to foreign workers. The following analysis summarizes the problems with this section:

> Several studies indicate that the employment of temporary foreign workers in agriculture adversely affects wages and working conditions. The Department of Labor has concluded that use of temporary labor in agriculture tends to lower prevailing wage rates. A comprehensive agriculture prevailing wage survey conducted by the New York Department of Labor illustrates the harmful impact on wages and working conditions experienced as a result of the employment of these workers. This survey compared wage rates in areas where employers used temporary foreign workers and areas where domestic workers were used. Wages were consistently depressed in areas where employers relied upon temporary foreign labor. As recognized by the Department of Labor, employers can make temporary workers work for lower wages and under depressed working conditions because they fear repatriation.[23]

Though temporary workers have been discussed only with respect to agriculture, it is conceivable that a similar argument could be made for the creation of an urban guestworker program. The potential beneficiaries, transitional and marginal employers of undocumented workers, would gain time to improve on their production technology. As ex-emplified by the agricultural employers of Braceros, these workers would provide firms with a temporary latent reserve capacity.

The overall effect of Simpson-Mazzoli on the working class would be an erosion of civil rights, institutionalization of sub-classes of workers, and an acceleration of trends toward marginalization, internationalization, or mechanization among the immigrant dependent industries. If this bill presents such a threat to working class interests, why has it been so popular and likely to be reintroduced? For one, the employment issues are complex and easily reduced to a matter of the quantity of jobs. Though employment issues are usually not isolated (social welfare concerns and a sense of degradation of the quality of life are integral to the broader justification), they generate mass appeal. This has been legitimized by the position of organized labor which opposes the temporary worker program, but supports the other elements.[24] Organized labor correctly understands that their strength has dissipated coincident with the utilization of immigrant labor. The fallacy is adoption of the prevailing notion that the situation can be corrected by institutional means. This deflects from the structural causes of labor displacement and unemployment which Simpson-Mazzoli does not address, and which have the potential of over-whelming the new institutions once they are put into effect.

Secondly, the public has been made to feel that issues of national sovereignty are at stake. Words like "invasion" are used to describe the influx of immigrants. As INS Commissioner Alan C. Nelson has stated, "we are still far from controlling our borders," so the logical extension is that we have lost control of the border.[25] Taking that a step further, this "loss" is seen as undermining our social fabric. In the words of Senator Simpson:

> If immigration is continued at a high level, but a substantial portion of these new persons and their descendants do not integrate fully into the society, they may well create in America some of the social, political, and economic problems which exist in the countries from which they have chosen to depart. Furthermore, if language and cultural separatism rise above a certain level,

> the unity and political stability of the Nation will--in time--be seriously eroded. Pluralism within a united American nation has been our greatest strength. That unity comes from a common language and a core public culture of certain shared values, beliefs, customs, which make us distinctly "Americans."[26]

The concept of what is "American," whether that is jobs, our culture, or national stature underlies support of the bill. Here the observations of Alejandro Portes are instructive. He writes:

> In its official commentary on the Immigration Reform Bill, the Justice Department echoes a sentiment repeated many times in recent months: "We must regain control of our borders," declares the document, implying that they have somehow been lost to foreign forces. In fact, if control has been relinquished at all, it has been to a segment of America's own employers. The fact that the present immigration confrontation has occurred between the state and a sector of the dominant class explains why those at the forefront of the reform movement are not the trade unions or the organizations of the ethnic minorities...the interest of the state in this issue has grown not so much because unauthorized immigrants are coming and are being employed as because the entire process has become so visible. The generalized perception that the government has "lost control of the borders" seriously undermines its legitimacy and hence its ability to enforce other rules domestically and negotiate with governments abroad. Had the flow remained a low-key affair, as in previous decades, the state would surely have remained willing to accommodate the interests of influential locals in the Southwest. Hence, the oft-declared need to "do something" about clandestine immigration will lead, ultimately, not to a serious attempt to stop the flow, but to restoring the image of state control in this area. The real gap which separates proponents of immigration reform in Washington from events in the rest of the country lies in their belief that once the law has passed, social and economic reality will adjust to the legal writ.[27]

Thus, the need to relegitimize the state in the aftermath of a period of crisis is the fundamental purpose of the legislation. That it could ultimately weaken the position of working class people is further exacerbated by proposed urban legislation, specifically, urban enterprise zones.

Urban Enterprise Zones: Spatial Concentration of Underemployment

In contrast to legislation specifically aimed at changing the supply or demand of labor, another approach is to redefine the spatial context in which economic activity takes place. This is essentially the effect of the urban enterprise zone

concept. Historically, the first enterprise zone legislation was adopted in England in 1980, modeled after the free-trade zones in Hong Kong, Taiwan, and Singapore. The idea was to attract businesses into underutilized or non-productive areas through preferential tax treatment and relaxation of public regulations. This idea caught on quickly in the U.S. among advocates of a "free enterprise" economy operating with the minimum of constraints as a means to stimulate distressed communities. Subsequently, an urban enterprise zone program was announced as the priority item by President Reagan in his State of the Union address of 1982.

At the national level, the most evolved proposal was introduced in 1981 (S2298 and HR 7563). As the legislation was shaping up, it was taking on the following attributes: (1) the Department of Housing and Urban Development would select 25 zones annually for three years (resulting in 75 zones); (2) selection would be based on state and local efforts to reduce regulations in the zones, increased local services, the inclusion of private organizations in the delivery of services, and the creation of neighborhood development associations; (3) specific criteria for eligibility include the minimum Urban Development Action Grant distress criteria plus one of the following: an annual average unemployment rate of at least 1.5 the national average; a poverty rate of 20 percent or more; at least 70 percent of the population must have had incomes below 80 percent of the population of the surrounding community; or the zones must have experienced a population decline of at least 20 percent between 1970 and 1980; (4) federal tax provisions would include: investment tax credit; nonrefundable wage credits; elimination of capital gains taxes on the sale of zone property; and the provision of a maximum 15-year loss carryforward; (5) federal regulatory relief would apply to all federal rules except those affecting public health, the environment, occupational health and safety, civil rights, and the minimum wage (as well as others mandated by law), however

the Labor Department would be given discretionary authority to relax or eliminate application of minimum wage legislation to teenagers; (6) the zones would be designated such that one third would be located in rural areas; (7) they would range between one and five square miles in size; and (8) lastly, the federal phase out period would consist of a 25 percent annual decrease in assistance starting from the initial period (ie lasting for four years), though state and local commitments are expected to last for 20 years with a four year final phase-out (shorter program periods are conceivable).[28]

The most important aspect of this potential legislation is that it begins to adopt employment standards designed for export processing zones. Incentives to capital to locate in the zones could most probably lead to a lowering of the minimum wage paid to youths, to an erosion of work place standards, and to essentially a "capturing" of a second-class workforce. The parallel to the Third World experience is obvious. Employment within the zones would begin to approximate the situations confronted by the transitional workers discussed in this research. The difference is that work place relations among the transitional workers were, to some extent negotiable. Within the zones, they would be more highly regulated. This would essentially create a situation where U.S. citizens were forced to take on some of the attributes of the undocumented workforce.

Overview

Each of the proposed pieces of legislation discussed illustrates the unsettled nature of the economy created by the hypermobility of capital and labor. To some extent, these proposed bills represent policies that attempt to put brakes on rapidly moving economic trends without addressing the underlying structural causes. Consequently, they either force non-immigrant segments of labor to become like the immigrant workforce (since immigrants perform specific functions to perform),

or they accelerate the trends by capital towards greater mobility, automation, and the like. Like the parable about the three blind persons who touch a different part of an elephant each and proceed to describe the entire animal in terms of the piece being held, the legislation discussed take discrete parts of the economy as if they are unconnected and construct frameworks for policy intervention. At the minimum, some method of setting and analyzing policies at the naitonal level should be developed (a national planning board?). This would result in an institutional response to the loss of political will created by the internationalized economic order. But the critical step is in recognizing that marginalization of the working class is a growing and permanent factor in the "development" of advanced post-industrial societies; that this situation is not created by the immigrant workforce; and that the situation is one of international interdependence rooted in the hypermobility of capital and labor.

In sum, the workers studied in this research were seen as transitional as if to imply impermanence. However, if employment instability; an increase in working class absorption of the costs of social reproduction; and a lack of accountability by capital to communities characterize the up-and-coming situation, then impermanence is a spreading way of life. The social, economic, and political implications are enormous, and beyond the scope of this discussion. However, they bring to our attention the extent to which work place relations and the labor process have moved out of the shop floor and must be seen in terms of the total construction of society.

Observations on the Research

From the beginning to it's completion, this research unfolded in ways that were unanticipated. Though the initial research questions were retained throughout, insights emerged that could not be fully addressed by the study. One

was the importance of sub-contracting among firms employing immigrants. Whether in garment, electronics, auto, or the emerging services, it is apparent that immigrant (and undocumented) workers, parallel to the export processing zone workforce, are highly coincident with a trend to subcontract out rationalized work to firms employing the most vulnerable labor. This tendency to transfer risks to the most powerless segments of society was described by Peter Marris, as noted earlier. The availability of immigrants for production is one element that currently contributed to the character of industrial organization in a way that supports Marris' analysis.

Secondly, the incidence of race and citizenship with respect to employment posed more questions than could be answered. Future comparative research on race and immigrant status, especially under the new economic order (and urban hierarchy) would shed light on this issue. For example, the experiences of Black Caribbean workers, Asian refugees, and others compared to their citizen counterparts and to the Latino undocumented workers would clarify how race factors into the absorption of immigrant labor.

In addition, theories on the organization of economic activities in space should begin to address the way in which proximity to international borders presents locational advantages. As in the concept of"sunbelt" and "snowbelt" regions, a distinct "borderbelt" phenomenon may warrant further investigation.

Lastly, future research will need to concern itself with the outcome of transitional labor on U.S. society. Like guestworkers, after their purpose has been met, will they still remain in the U.S.? Will they then be upwardly mobile, locked into the bottom of the bifurcated structure of employment opportunities, or become part of a growing mass of mobile workers that enter in and out of international settings?

These questions, stimulated by the research, arose out of recognition that some immigrants serve in a transitional capacity. The main purpose of the study was to underscore that immigrant and undocumented labor have specific roles best understood by analyzing the nature of demand for labor. The concept of transitional labor is itself transitory and most applicable to the recent period of massive labor and capital migration. Phases of rapid industrial transformation are particularly significant times for the employment of immigrant labor. During expansionary periods, the legal immigrants are absorbed into the economy, but during decline, they become redundant. In this way, undocumented workers are ideal. Lacking legal protection, they unwittingly benefit employers seeking union and wage erosion. Ironically, they may actually be preferable to legalized guestworkers from the point of view of assiting the transition, if guestworkers temper the momentum toward automation. From this perspective, the market found an alternate solution to guestworkers. Though the economy appears to have weathered the worst of the downturn, the transformation is still working its way out. Some sectors may see many industries devolve into sweatships, in which case, the demand for undocumented workers will continue, while others may complete the trend towards capital mobility and automation. As the latter occurs, the demand for undocumented workers should decline. In the process, U.S. workers are coming to expect lower wages and benefits, thereby lessening the attractivity of an "illegal" laborforce. Consequently, in time, the transitional role of undocumented workers will be completed, and in its place will be a new labor demand associated with a restructured employment base.

Chapter 6 Notes

1. Robert A. Rosenblatt, "U.S. Growth Declines to 7% Annual Rate," Los Angeles Times, September 22, 1983.

2. Robert A. Rosenblatt, op.cit.

3. Edward Soja, Rebecca Morales, and Goetz Wolff, "Urban Restructuring: An Analysis of Social and Spatial Change in Los Angeles," Economic Geography, Vol. 59, No. 2, April, 1983, p.204.

4. Thierry J. Noyelle, "The Implications of Industry Restructuring for Spatial Organization in the United States," in Frank Moulaert and Patricia Wilson Salinas, Regional Analysis and the New International Division of Labor, Boston: Kluwer-Kijhoff Publishing, 1982, p.118-120.

5. Michael Storper and Susan Christopherson, "The Changing Structure of the Motion Picture Industry," work in progress.

6. Peter Marris, Loss and Change, Garden City, New York: Anchor Press, 1975.

7. See Joseph Grunwald, "Internationalization of Industry: U.S.-Mexican Linkages," Paper delivered at the Second Annual Conference of the Regional Impacts of U.S.-Mexican Relations, May25-27, 1983, University of Arizona, Tuscon; and Harley Shaiken, "Effects of Programmable Automation in Four Cases," in Office of Technology Assessment, Automation and Work: The Work Environment, 1983.

8. These categories are not necessarily mutually exclusive. An example of strong national planning is Felix Rohatyn's proposal for a Reconstruction Finance Corporation. At the other extreme, Derek Scherer and Martin Carnoy in Economic Democracy stress community control over development from the bottom up.

9. Lester Thurow in The Zero-Sum Society argues in favor of supporting growth industries while Felix Rohatyn serves as a model for helping ailing industries.

10. "Summary Statement of Douglas A. Fraser Before the Subcommittee on Trade of the House Committee on Ways and Means on HR 5133 Fair Practices in Automotive Products Act, September 22, 1982," p.3 released by the UAW. Fraser goes on to say, "The ,auto. industry consumes 21 percent of all the steel used in this country, 50 percent of the malleable iron, 34 percent of the zinc, 12 percent of the primary aluminum, 13 percent of the copper and 60 percent of the synthetic."

11. Douglas Fraser, op.cit., p.5.

12. William B. Johnston, "Relocating Automobile Production to the Developing World: The Multinational View," a Paper of The Future of the Automobile Program, M.I.T., June 1982, p.2.

13. William B. Johnston, ibid.p.12.

14. William B. Johnson, "Issues in Multinational Sourcing of Production," a Paper of The Future of the Automobile Program, M.I.T., May 1982, p.8.

15. Peter A. Schey, "Supply-Side Immigration Theory: Analysis of the Simpson/Mazzoli Bill," La Raza Law Journal, Vol. 1, No. 1, Spring 1983, p. 53-54.

16. In addition to California, Connnecticut, Delaware, Florida, Kansas, Maine, Massachusetts, Montana, New Hampshire, New Jersey, Vermont, Virginia, and the City of Las Vegas, Nevada all have employers sanctions laws. Presumably, other nations also have a system for imposing employer penalties.

17. Kitty Calavita, "California's 'Employer Sanctions': The Case of the Disappearing Law," Research Report No. 39, Center for U.S.-Mexican Studies, University of California, San Diego, 1982, p.45. See also "Information on the Enforcement of Laws Regarding Employment of Aliens in Selected Countries," a Report by the U.S. General Accounting Office, Gaithersburg, Maryland, August 31, 1982.

18. Kitty Calavita, "Employer Sanctions Legislation in the United States: Implications for Immigration Policy," in Wayne A. Cornelius and Ricardo Anzaldua Montoya (eds.), America's New Immigration Law: Origins, Rationales, and Potential Consequences, Monograph No. 11, Center for United States-Mexican Studies, University of California, San Diego, 1983, p.79.

19. Thomas Bailey and Marcia K. Friedman, Immigrants and Native-Born Workers in the Restaurant Industry in New York City, New York, Conservation of Human Resources, 1981.

20. See Peter A. Schey, op.cit.

21. As quoted in Peter A. Schey, op.cit., p.56-57.

22. For qualifications for admission, see Peter A. Schey, op.cit., p.67-68.

23. Peter A. Schey, op.cit., p. 62-63.

24. The dominant position is taken by the AFL-CIO whose views are contained in "Immigration Bills: A Step in the Right Direction," AFL-CIO Legislative Alert!, No. 5-82, March 29, 1982.

25. Robert L. Jackson, op.cit.

26. Congressional Record--Senate, March 17, 1982, p.2216.

27. Alejandro Portes, "Of Borders and States: A Skeptical Note on the Legislative Control of Immigration," in Wayne A. Cornelius and Ricardo Anzaldua Montoya (eds.), America's New Immigration Law: Origins,

Rationales, and Potential Consequences, Monograph No. 11, Center for United States-Mexican Studies, University of California, San Diego, 1983, p.25-26.

28. See The Bureau of National Affairs, Inc., "Reagan Sends Congress Legislation for Enterprise Zone Program," Housing and Development Report, March 29, 1982, p.858-859.

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APPENDIX I

RESEARCH METHODOLOGY

Research Design

In contrast to most immigration studies that use the individual as the unit of analysis, this research is a study of firms, primarily in the auto industry and in the greater Los Angeles region that were, at the time of investigation, themselves employers of undocumentd workers, or faced competitors who employed undocumented workers. At the broadest level, the study addresses the historical transformation of labor and the role of immigrant labor and the role of immigrant labor relative to structural changes in the industrial base of the U.S. Within this context, developments in the structure of the auto industry nationwide and the evolution of the auto industry regionally, given Los Angeles product and labor markets, further situate the study. The most specific observations are at the shop floor level and consist of comparative analyses of competitor firms within certain product lines, some of whom employ undocumented workers, while others do not. These three levels of discussion (nationwide and in the context of the entire economy; regional and with an industry focus; and at the shop floor, among firms) are necessary in order to make the appropriate connections between firms' behaviour on one hand, and national policy on the other.

The firm specific case studies provided the basis for the broader analysis and theoretical discussion. The case studies were completed in four steps: (1) identification of the firms; (2) identification and surveying of the workers; (3) confirmation of the data; and (4) data analysis. Each of these steps will be discussed in detail. The method used to develop the data base was derived from techniques that have been applied in oral history, industrial anthropology, and labor

sociology. Informed persons explained the evolution of market conditions in Los Angeles, and identified firms and key individuals within the firms who could describe the labor process explicitly. These key informants were interviewed, and their information was then confirmed with other available material and analyzed. There were two reasons for the seemingly indirect route for learning about firms. First, it was felt that employers would probably not provide the information desired as much of it focused on highly sensitive internal labor relations. Secondly, after initial discussions with workers in several firms, it was felt that, in most cases, there were certain individuals who were very knowledgable and could give fairly accurate information about the relations of production. Consequently, this data was developed from workers' observations.

The purpose of the interviews was to obtain enough quantitative and qualitative information to test hypotheses about firm behaviour. Given that the workers central to the study were, by definition, clandestine and unapprehended, and that market conditions firms encountered were changing rapidly in response to the crisis in the economy, further shaped the interpretability of the data. The information gained in the study was used as verification of certain tendencies that lead one to support or suspect the logic or assumptions behind the hypotheses.

The first set of hypotheses concern observable conditions that should appear if primarily supply factors are shaping labor markets. Using the North and Houstoun heuristic model as the conceptual framework, it is possible to develop a four stage or category model of worker and firm (industry) behaviour.[1] Each category reflects both an increasingly larger supply of undocumented workers, and a progressively greater amount of risk that an employer is willing to assume. The risk results because the workers are illegal and subject to deportation, thereby bringing instability to the workplace. With a larger supply of workers, it is

hypothesized that wage rates would drop and labor turnover would be greater. Furthermore, each stage of the model is thought to correspond with different tacit advantages undocumented workers bring to the employer. The model can be thought of schematiclaly in the following way:

A Conceptual Model of Worker and Firm(/Industry) Behavior

Category	Undocumented Workers at the Workplace*	Wage Rates	Tacit Advantage to Employers
1	negligible	unchanged	none
2	few	average wage at low end	control over labor flexible lay off, substitute for other labor
3	many	substandard	same as above plus possible violation of labor standards
4	majority	below minimum	extreme case of the above manifested in sweatshops

*This is a categorical variable.

The method for testing the hypotheses was to compare the percent of undocumented workers at the workplace, the wage rate effect, and the tacit funciton performed by the worker. Determination of the function or advantage associated with the workers were derived from worker interviews and other source data, such as from unions or the State of California. It was important that the firms studied not be considered secondary labor market dependent in order to test this model, otherwise it would have been impossible to distinguish between supply

created effects and secondary labor market conditions (e.g., low wages, high turnover).

A second hypothesis was developed in lieu of accepting or rejecting a null hypothesis to the above. That is, instead of simply accepting or rejecting supply arguments on the basis of the findings previously described, the intention was to also find specific conditions related to the demand of undocumented workers. In this case, it was necessary to see whether the employment for undocumented workers was a strategy for survival by firms in light of their product demand, production technology, and availability of capital relative to the product and labor markets for each firm. Whereas the first set of hyptotheses could be tested on cross-sectional data, this hypothesis requires times-series information that specifies how firms actually behave over time. If the employment of undocumented workers seemed to explain a point of transition in a firm's long-run behaviour (e.g., until a firm eventually mechanized, moved, or changed the product line), then demand factors were thought to largely influence market forces.

A firm's long-run demand for labor can be understood by examining product market positions. Like labor markets, product markets are also segmented, but in this case it refers to the differentiation among firms that have a substantial amount of control over products (also known as core firms), as opposed to those which are more competitive (or peripheral firms).

Product demand can be thought of as composed of relatively stable and less stable components. The stable part is the base demand while the unstable portion tends to exhibit more cyclical and seasonal fluctuations. Park of the work force is applied toward the stable product demand, while part is attached to the unstable demand and is the basis for eocnomic adjustments. Firms sustaining a long term drop in product demand, or chronic fluctuaitons, are better off if they can blur the

distinction between stable and unstable labor. They would want to retain a commitment to the firm a more stable labor force would exhibit. Yet they would also want to be able to treat these workers as part of the less stable labor force by holding down or cutting back wages, or reducing the numbers or hours of employment among these workers, if they had to due to difficult demand conditions.

For most firms, discharging labor is costly, and reducing the wage rate is difficult. Lay-offs usually must comply with an accepted means of due process and understood preference systems, such as on the basis of seniority. Wage rate reduction may result in worker resistance, whether or not the labor force is unionized. An employer gains more control over these particular labor costs with an undocumented labor force, although this is not the only recourse for employers. For example, they could also force union concessions, or move to low cost labor areas. In the long run, these firms would have to adapt to a problemmatic product market by: moving out of that product line altogether; finding more permanent means to reduce production costs, such as through mechanization; or changing its positions in the product market through mergers with competitor firms (these being only a few of their alternatives). Consequently, the employment of undocumented workers may be seen as a short-run solution, and one in which the ultimate resolution may display a very different demand for labor than might have been apparent during the period of transition. It was anticipated that this type of defensive strategy would be most evident among peripheral firms. In order to test this concept, it was important to analyze firms in core and periphery product market positions, and facing a depressed product demand. The objective was to understand, through case studies, the short- and long-term role played by

undocumented workers for these firms. As previously mentioned, the case studies were undertaken in four steps. These steps will be explained in order.

(1) Identification of the firms: Two decisions were made prior to choosing the firms. The first was to limit the study area to Los Angeles County, and the second was to focus on Mexican and other Spanish-speaking undocumented persons. Both of these decisions were made in response to exisitng opportunities. Los Angeles is important because it has become a major point of entry for Latin, Asian, and other immigrants and refugees. It also has a well-developed industrial base, which made it possible to study the employment of undocumented persons in heavy manufacturing. To have added other locations would have meant that regional variables could not be held constant, and would have shifted the research from one of a mirco-level plant study to one of regional variation.

The second decision was to focus on Mexican and other Spanish-speaking persons. This was decided largely due to the author's cultural background (Mexican) and ability to communicate in Spanish. Establishing credibility in the Latino community and among the workers was fundamental for carrying out the research.

Given the location and segment of the labor market to be studied, the next decision centered on the industries to be researched. This was largely conditioned by three factors: product market characteristics; applicability to other sectors; and the extent of cooperation that allowed entry into the work force. As previously noted, if product demand in an industry is unstable, it translates into an unstable demand for labor. When firms are especially sensitive to cyclical fluctuations or variations in economic activity, they require a highly variable cost structure for which undocumented labor represents a potential escape valve. Similarly, if a firm with a price or income elastic demand for its product faces

either a rapid decline in product demand, or if product costs are rapdily increasing, employers may substitute low cost undocumented labor for other labor as a short run solution, given that production technology is essentially fixed. The auto industry was particularly good for studying both situations. Demand for this industry's product is highly dependent upon major customers' (consumers and assemblies) willingness to invest in capital goods. The health of the economy and the durability of capital both contributed to an exaggerated bunching of orders. The result is a pattern of cyclical demand typified by severe fluctuations in amplitude. Coupled with the recession and rising foreign competition, the auto industry has had to cope with a sustained low volume of sales.

A second reason for working with auto is that this is a highly linked industry. The health of this industry affects many other sectors. Consequently, how firms in the auto industry behave is probably illustrative of strategies firms in other consumer durable product lines facing similar problems would also be inclined to take.

Lastly, but equally important, it was possible ot learn about firms only if cooperation by workers could be obtained. Initially, time was spent in the field talking to union representatives, academicians, low enforcement personnel, and others to obtain an understanding of the industries in which unapprehended undocumented workers could be found. It was particularly necessary to obtain union cooperation because union officials identified the specific firms they thought employed undocumented persons, as well as the names of knowledgable persons (key informants) who could provide detailed information on the firm. Non-unionized plants were usually ones in which a union had waged an unsuccessful campaign, or had been decertified, so a certain amount of union data could be used to corroborate the workers' information. The unions that proved to be most

cooperative were those organizing in the automobile industry, although other unions were helpful and provided entree into non-auto related firms.[2] These latter studies were used for comparative purposes. In order to assure anonymity, names of the union locals, firms, and individuals are withheld.

Twenty-one firms were analyzed in the study. The firms were organized into the following categories: (A) assemblies, (B) wheels, (C) headers (an optional modified exhaust manifold attached to a car for the purpose of improving performance), (D) batteries, (E) auto related, and (F) non-auto related (a broad category that included a range of firms from manufacturers of nails to military equipment). The assemblies represented "core" firms that dominated product market conditions. Wheels and batteries are original equipment sub-contractors, while batteries and headers are after-market items. The auto-related and non-auto categories provided supplemental material on each product market position: assemblies, original equipment sub-contractors, and after-market producers.

(2) Identification and surveying of the workers: The study of unapprehended undocumented persons, at the workplace, is much different and much harder than a study of apprehended persons. It is possible to obtain samples of an unapprehended undocumented population if the data base consists of return migrants in their home country, or immigrants who have since legalized in the U.S. However, both of these approaches makes analysis of specific industries particularly difficult. Wayne Cornelius discussed this problem at length and noted that "...a clandestine population cannot be sampled through any strict randomization procedure, and the total number of cases which can be observed or interviewed is likely to be substantially smaller than in the conventional sample survey, regardless of the sampling procedure," and further stated "in the final analysis...researchers--as well as consumers of their work--will simply have to accept something less than

conventionally rigorous standards of population sampling, if they want to find answers to many of the empirical questions that are at the heart of the debate over undocumented immigration and its impact on U.S. society."[3] The problem of trying to obtain information on an ill-defined population led to procedures used in this study: key informants identified through union officials or other workers.

The key informants were named by union representatives or by co-workers or acquaintances as persons who were knowledgable about their firms. These persons were both undocumented and documented, and of various backgrounds, Latino, Black, and Anglo. They supplied information on their workplaces through an extensive person-to-person interview lasting 3 to 4 hours each. There were forty-two interviews ranging from one to five interviews per firm with 2 1/2 respondents being the average. The objective was to conduct as many interviews as necessary in order to obtain good information about the workplaces.

As noted in Chapter 4, the majority of the data used in this research was derived from extensive worker questionnaires. In order to determine the flow and organization of work, including the placement of workers, the respondents were asked to draw a lay-out of the job site and then disucss the workers they could identify at each station. It was found that asking respondents about departments in the abstract was confusing because work tended to be task or flow oriented. Instead, a method of cognitive mapping was adopted from environmental psychology where researchers seek information on the use of space. The primary advantage was that it did not assume a prior order to the organization of work. In addition, the respondents identified with their visual presentations, often referring back to specific locations, or pointing to their lay-out as they discussed the place of work.

The questionnaire consisted of some open-ended questions, some with limited answers, and some questions that required the participant to draw with a pencil how work was conducted. These latter questions were particularly important for breaking the ice and for getting at the details of workplace interaction. The questions focused on the organization of work, workplace relations, attributes of the workers, and the history of ownership and production at the firms (see Appendix for a copy of the questionnaire). Occasionally information requested could not be obtained, and most respondents could only discuss their departments or shift. On the basis of the questionnaire and supplementary union data, information was obtained on 2,321 persons in 21 firms. The number of key informants for each of the firms were: (1) 2; (2) 3; (3) 5; (4) 2; (5) 2; (6) 2; (7) 1; (8) 1; (9) 2; (10) 1; (11) 2; (12) 2; (13) 2; (14) 2; (15) 3; (16) 3; (17) 1; (18) 1; (19) 1; (20) 2; (21) 1. The total number of key informants came to 42. It should be noted that the majority of the interviews were conducted in Spanish.

(3) Confirmation of the Data: The data on the firms was used to develop case studies. Initially, the data was checked against other source material, the most important being union lists of workers (these were generally available even if a campaign had been unsuccessful or if the workers voted to decertify). Only the most correct information was retained. Amplifying the data set were interviews with union personnel, industrial engineers, labor economists, and numerous other informed persons; historical material supplied by unions; and newspaper and trade journal articles. Consequently, the case studies consist of two types of data, some that is quantifiable, and the historical, contextual material.

(4) Analysis: The final task, data anlayis, was discussed in the case studies and statistical overview. In brief, the data was subjected to descriptive statistics and regression analysis. In the case studies, the firms were studied in light of their competitive situation over time.

Appendix I Notes

1. Adopted from David S. North and Marion F. Houstoun, The Characteristics and Role of Illegal Aliens in the U.S. Labor Market: An Exploratory Study, Linton and Company, Inc., Washington, D.C., March 1976, p. 155-156.

2. Unions that assisted in this research include locals in the United Auto Workers (UAW), International Ladies Garment Workers Union (ILGWU), United Electrical Workers (UE), and International Union of General Workers (IUGW). It should be noted that most of the locals organized outside of the industries are identified by name. Five union locals assisted in substantiating the data, identifying the key informants, and providing other pertinent information.

3. Wayne A. Cornelius, "Interviewing Undocumented Immigrants: Methodological Reflections Based on Fieldwork in Mexico and the U.S." Working Papers in U.S.-Mexican studies, Program in United States-Mexican Studies, University of California, San Diego, 1982, p.5 and 4 respectively.

I.D.#:_____

INDUSTRY STUDY QUESTIONNAIRE

CONFIDENTIAL

I.D.#:_____

INTRODUCTION. READ EXACTLY AS WORDED TO RESPONDENT ONLY.

I'm working on a research project conducted through UCLA. We are interviewing workers in Los Angeles in order to learn about their work. The information we get from this study will be used for improving methods of economic development planning.

Your participation in this survey is entirely voluntary. However, your cooperation is very important because others have described you as knowledgeable about your particular employment situation.

You may be assured that your answers are strictly confidential; all responses will be combined with those of others into statistical reports. There will be no way for anyone to identify individuals who provided the information.

INTERVIEWER ACKNOWLEDGES READING INFORMED CONSENT STATEMENT.

I ACKNOWLEDGE THAT I HAVE READ THE INTRODUCTION EXACTLY AS WRITTEN.

_____ _____

INTERVIEWER SIGNATURE DATE

TIME BEGINNING:_____ AM PM

I.D. #:_____

INDUSTRY STUDY QUESTIONNAIRE

(FOR QUESTIONS RESPONDANT IS UNABLE TO ANSWER, ASK WHOEVER ELSE MIGHT BE ABLE TO ANSWER.)

In this survey, I will be asking you questions about the factory where you work. I would first like to ask you some questions about what is made at the factory where you work and who the factory owners are.

1. What are the main products produced at your factory?

   LIST IN ORDER OF MENTION.

   PRODUCT 1:_____

   PRODUCT 2:_____

   PRODUCT 3:_____

   OTHERS: _____

IF ONLY ONE MENTIONED	SKIP TO Q2.....1
IF MORE THAN ONE MENTIONED	ASK Q1A.....2

   A. Which one of these is the most important? (in terms of the quantity of units produced.)

   MOST IMPORTANT PRODUCT:_____

2. To your knowledge, have other products been made here which have been discontinued?

   YES.....ASK Q2A.....1

   NO.....SKIP TO Q3.....2

   DON'T KNOW...SKIP TO Q3.....8

A. What were these products? LIST IN ORDER OF MENTION.

DISCONTINUED 1:_____

DISCONTINUED 2:_____

DISCONTINUED 3:_____

OTHERS:

B. FOR EACH MENTION, ASK: In which year did they stop making (...)?

YEAR FOR 1:

YEAR FOR 2:

YEAR FOR 3:

OTHERS:

3. Who is the owner?

An individual,.....1

A corporation, or.....2

Some other type of owner.....3

SPECIFY:

Don't Know.....8

4. What year was the factory started at the present location?

YEAR STARTED: _____

DON'T KNOW.....998

5. Do the owners own any other businesses?

YES.....ASK Q5A.....1

NO.....SKIP TO Q6.....2

DON'T KNOW.....SKIP TO Q6.....8

A. Are they in the U.S.?

YES.....PROBE FOR FOLLOWING....1

NO.....ASK Q5B.....2

DON'T KNOW.....ASK Q5B.....8

Where?	How many?	Product(s):

B. Are there some outside the U.S.?

YES.....PROBE FOR FOLLOWING.....1

NO.....SKIP TO Q6.....2

DON'T KNOW.....SKIP TO Q6.....8

Where?	How many?	Product(s):

SAY: In some of the following questions, I will use the term "resident workers" to refer to persons who have work permits (green cards), or are citizens of the U.S.

IF WORKERS ARE UNIONIZED.....ASK Q6.....1

IF NO UNION.....SKIP TO Q18.....2

6. In what year were the workers at the factory where you work first represented by the ...(STATE UNION)?

YEAR UNIONIZED:_____

7. Was there a specific incident or series of events that led the workers to organize a union?

YES.....ASK Q7A.....1

NO.....ASK Q7B.....2

DON't
KNOW.....ASK Q7B.....8

A. Describe the incident or events.

B. What was the reason most workers gave for unionization?

8. Compare the following workplace conditions before and after you obtained a union contract:

	BEFORE	AFTER
WAGE RATES		
BENEFITS		
PROMOTIONS		
JOB SECURITY		
WORK CONDITIONS		

9. Were there other significant changes at the workplace that occurred as a result of the union?

YES.....1

NO.....SKIP TO Q10.....2

→ SPECIFY:

10. Describe the workers who were leaders in establishing the union.

11. Describe the workers who voted in favor of the union.

12. Describe the workers who voted against the union.

13. What role did undocumented workers play during the organizing campaign? RECORD VERBATIM

14. How did the factory managers act during the following periods:

ORGANIZING

ELECTIONS

NEGOTIATIONS

15. Has the original union contract ever been renewed?

YES.....ASK Q15A.....1

NO.....SKIP TO Q16.....2

DON'T
KNOW.....SKIP TO Q16.....8

A. Have there been any significant changes in the terms?

YES.....ASK Q15B.....1

NO.....SKIP TO Q16.....2

DON'T
KNOW.....SKIP TO Q16.....8

B. Describe those changes.

16. Have the workers at your factory ever been represented by a different union?

YES.....ASK Q16A.....1

NO.....SKIP TO Q17.....2

DON'T KNOW.....SKIP TO Q17.....8

A. Which union? _____

B. What events led to decertification of the other union?

17. What factors did the workers consider when they chose to be represented by the ... (PRESENT UNION) as opposed to any other union?

SKIP TO Q20

18. Is there an active campaign to unionize workers at your factory at the present time?

YES.....ASK Q18A.....1

NO.....ASK Q18B.....2

DON'T KNOW.....ASK Q19.....8

A. What stage of organizing are you in? (For example, signing cards, holding meetings...)

B. In this attempt to organize workers in your factory, what type of reactions are there?

1. by the top management:

2. by the formen:

3. by the resident workers:

4. by the undocumented workers:

19. Has there ever been a vote to unionize workers in your factory?

YES.....ASK Q19A.....1

NO.....SKIP TO Q20.....2

DON'T
KNOW.....SKIP TO Q20.....8

A. Did the vote lead to unionization?

YES.....ASK Q19B.....1

NO.....ASK Q19C.....2

B. What events led to decertification of the union?

C. What was the outcome of the vote?

D. Describe the workers who are leaders in the organizing effort.

E. Describe the workers who are in favor of a union.

F. Describe the workers who are against the union.

G. What role have undocumented workers played during the organizing campaign?

H. What union would the workers prefer a contract with?

Why is the (STATE UNION) preferred to other unions?

20. Have there ever been strikes or work stopages at this factory?

YES.....ASK Q20A.....1

NO.....SKIP TO Q21.....2

DON'T KNOW.....SKIP TO Q21.....8

A. When was the last strike or stoppage? _____

B. What was the reason for this strike or stoppage?

ECONOMIC (WAGES, BENEFITS, ETC).....1

UNION RECOGNITION.....2

UNFAIR LABOR PRACTICES.....3

WORKING CONDITIONS.....4

OTHER.....5

EXPLAIN:

ASK Q20C ONLY IF WORKERS ARE UNIONIZED

C. How was the strike called? Was it:

INITIATED BY THE WORKERS.....1

CALLED BY THE UNION.....2

WILDCAT.....3

D. Describe the events that led to the strike or work stoppage.

E. Were undocumented workers involved in the strike?

YES.....ASK Q20E1.....1

NO.....SKIP TO Q21.....2

DON'T KNOW.....SKIP TO Q21.....8

1. What role did undocumented workers play in the strike?

SUPPORT THE STRIKE.....ASK FOLLOWING.....1

a. How did they show support?

OPPOSE THE STRIKE.....ASK FOLLOWING.....2

b. How did they show opposition?

c. What were the reasons for opposition?

ACT AS STRIKEBREAKERS.....ASK FOLLOWING.....3

d. Where did the strikebreakers come from?

21. In the next section, I'll be asking questions about jobs in your factory. Before I continue, is there anything you would like to add or do you have any opinions about the products, ownership. or or organizing at the factory where you work?

22. How many people total are employed at the factory where you work? (total, i.e. production and managemnt)

EMPLOYEES: _____

23. How many undocumented people are employed at your factory?

UNDOCUMENTED: _____

24. Here is a blank piece of paper. Sketch a layout of all the buildings at your factory site.

IF THERE IS MORE THAN ONE BUILDING, ASK THE FOLLOWING AND WRITE THE ANSWERS ON THE BUILDINGS:

A. What type of work goes on in each building?

B. Show with arrows how the work flows from one building to another.

25. Here is another blank sheet of paper. For the buildings you know the best, draw a floor plan that shows what kind of work is done where.

IDENTIFY DEPARTMENTS

26. FOR EACH PRODUCTION DEPARTMENT ASK: What type of machinery is used here? Note comments here.

WRITE THE TYPE OF EQUIPMENT ON THE FLOOR PLAN SHOW WITH ARROWS THE PROGRESSION OR FLOW OF WORK

A. Which machines are new? INDICATE ON FLOOR PLAN. Note comments or answer NONE here.

B. Which machines are not regularly maintained and are being allowed to run down? INDICATE ON FLOOR PLAN. Note comments or answer NONE here.

27. How many work shifts are there?

SHIFTS: _____

IF THERE IS MORE THAN ONE SHIFT, ASK:

A. How many people work per shift?

DAY SHIFT: _____

SWING OR NIGHT SHIFT: _____

GRAVEYARD: _____

OTHER: _____

B. Do you know when did multiple shifts begin?

YES.....ASK WHEN?.....1

NO.....SKIP TO Q37C.....2

SHIFT DATE: _____

C. Why is there a need for multiple shifts?

28. Let's go through this together. Beginning with the main office and going on to the production departments, list all of the departments. List which departments you can describe in detail. Note with a checkmark.

29. FOR EACH DEPARTMENT ON THE LIST THAT THE RESPONDANT IS FAMILIAR WITH, ASK THE FOLLOWING AND NOTE ON THE JOB SHEETS:

    A. How many people work in this department?

    B. What are the job titles or job classifications of each of the workers?

30. FOR EACH WORKER, IDENTIFY THE FOLLOWING ON THE JOB SHEETS:

    A. SEX (M or F)

    B. RACE (W white, B black, L latino, A asian, O other)

    C. AVERAGE HOURLY EARNINGS

    D. LENGTH OF TIME ON THE JOB

    E. CITIZENSHIP STATUS (R resident, G greencard, or U undocumented)

31. How do most people learn about job openings at your factory?

FOR Q31 ON, NOTE CODE BOX ON LEFT. IF BOX IS MARKED WITH X, ASK Q; IF NOT MARKED, SKIP.

32. What is required for a worker to get hired into the factory?

☐ A. Is hiring different for men and women?

YES.....ASK Q31A1.....1

NO.....SKIP TO QB.....2

1. How is it different?

☐ B. Does it make a difference in hiring if a person is undocumented?

YES.....ASK Q32B1.....1

NO.....SKIP TO Q33.....2

1. What is the difference?

33. What determines how people are promoted?

☐ A. Is promotion different for men and women?

YES.....ASK Q33A1.....1

NO.....SKIP TO Q33B.....2

1. How is it different?

☐ B. Does it make a difference in promotions if a person is undocumented?

YES.....ASK Q33B2.....1

NO.....SKIP TO Q34.....2

2. What is the difference?

IN Q34, USE "RESIDENT" ONLY IF BOTH RESIDENT AND UNDOCUMENTED ARE AT WORKPLACE; OTHERWISE, DELETE

34. How are (resident) workers paid for:

straight time work?

CHECK 1

CASH 2

☐ overtime work?

CHECK 1

CASH.....2

☐ 35. How are undocumented workers paid for:

straight time work?

CHECK.....1

CASH.....2

☐ overtime work?

CHECK 1

CASH 2

☐ 36. Is the rate of overtime pay the same as for straight time?

YES... GO TO INSTRUCTION.....1

NO.... ASK Q36A 2

A. What is the pay rate for overtime work?

OVERTIME RATE: _____

☐ B. Are undocumented workers paid at the same rate for overtime work as resident workers?

YES ..... ASK Q36B1 1

NO ..... SKIP TO Q37.....2

1. What is the difference in the rate of overtime pay?

UNDOCUMENTED OVERTIME: _____

37. Does the employer provide benefits?

YES ..... ASK THE FOLLOWING.....1

NO ..... SKIP TO Q38 2

A. What vacation time and pay is provided?

NONE ..... SKIP TO Q37B 1

VACATION: _____

B. What sick leave is provided?

NONE..... SKIP TO Q37C 1

SICK LEAVE: _____

C. What health insurance is provided?

NONE.....SKIP TO Q37D.....1

HEALTH INSURANCE: _____

D. What holiday time and pay is provided?

NONE.....SKIP TO Q37E.....1

HOLIDAY: _____

E. What pension plan is provided:

NONE.....SKIP TO Q37F.....1

PENSION: _____

F. Are any other benefits provided?

YES.....ASK Q37D1.....1

NO .....GO TO INSTRUCTION.....2

1. What is provided?

OTHER: _____

☐ E. Do the deductions for fringe benefits from the pay of undocumented workers differ from those of resident workers?

YES.....ASK Q37E1.....1

NO.....SKIP TO Q38.....2

DON'T KNOW...SKIP TO Q38.....8

1. Describe the difference for each benefit provided

38. FOR EACH SHIFT, ASK: This is a calendar for one month. Circle the days of the week an average production worker would have worked.

A. Is the schedule more or less the same during other months of the year?

YES.....SKIP TO Q39B.....1

NO .....ASK Q39A1.....2

DON'T KNOW...SKIP TO Q39B.....8

1. Describe the work schedule during other times of the year.

☐ B. Indicate with star (on the calendar) those days a person would be paid overtime.

☐ C. Is the work shift schedule different between resident and undocumented workers?

YES .....ASK Q39C1.....1

NO .....SKIP TO Q40.....2

DON'T KNOW...SKIP TO Q40.....8

1. Explain the difference in schedules.

39. Is there currently overtime work?

YES.....ASK Q39A.....1

NO .....SKIP TO Q40.....2

A. Who usually works overtime?

IF THERE IS MORE THAN ONE SHIFT, ASK:

B. Which shifts are working overtime?

OVERTIME SHIFTS:_____

☐ C. Does the amount of overtime work differ between resident workers and undocumented workers?

YES.....ASK Q39C1.....1

NO.....SKIP TO Q40.....2

DON'T KNOW...SKIP TO Q40.....8

1. What is the difference?

40. Have there been lay-offs recently?

YES.....ASK Q40A.....1

NO.....SKIP TO Q41.....2

A. What was the reason for the lay-offs?

B. Which departments lost employees?

C. Which job classifications were reduced as a result of the lay-offs?

D. What types of people were laid-off?

41. Has this factory expanded the number or workers recently?

YES.....ASK Q41A.....1

NO.....SKIP TO Q42.....2

A. What is the reason for the increase in the workforce?

B. Which departments have been hiring lately?

C. What jobs are the new workers taking?

D. Who is getting these new jobs?

42. The next set of questions focus on the product made at the factory where you work. Before proceeding, do you have anything to add concerning the work schedule or the jobs?

43. Who are the main purchasers of the product(s) made at your factory?

LIST IN ORDER OF MENTION.

PURCHASER 1:_____

PURCHASER 2:_____

PURCHASER 3:_____

OTHERS:_____

44. Is the demand for the product(s) stable throughout the year?

YES.....SKIP TO Q45.....1

NO.....ASK Q44A.....2

A. Describe how demand for the product(s) changes throughout the year.

45. At what price does the product (do the products) sell?

PRICE PRODUCT 1:_____

PRICE PRODUCT 2:_____

PRICE PRODUCT 3:_____

PRICE OTHERS:_____

46. Have sales of the product(s) increased or declined significantly in the recent past?

YES.....ASK Q46A.....1

NO.....SKIP TO Q47.....2

DON'T
KNOW.....SKIP TO Q47.....8

A. Was the change in sales an increase or a decrease?

INCREASE.....1

DECREASE.....2

B. When did the change occur?

SALES CHANGE:_____

C. What was the reason for the change in sales?

47. How many competitor firms are there in the Los Angeles area?

LOCAL COMPETITORS:_____

ASK Q48 AND Q49 ONLY IF THE RESPONDANT IS AWARE OF LOCAL COMPETITORS

48. Do the local competitor firms employ undocumented workers?

YES.....ASK Q48A.....1

NO.....SKIP TO Q49.....2

DON'T KNOW.....SKIP TO Q49.....8

A. How are undocumented workers treated by the competitors?

49. Do you know if the factory where you work uses similar machinery as that used by the local competitor(s)?

YES.....SKIP TO Q50.....1

NO.....ASK Q49A.....2

DON'T KNOW.....SKIP TO Q50.....8

A. Describe the difference in machinery.

50. Do you know if there are important non-local, perhaps international, competitor firms?

YES.....ASK Q50A.....1

NO.....SEE INSTRUCTION.....2

DON'T KNOW.....SEE INSTRUCTION.....8

A. Where are the non-local competitor firms located? LIST IN ORDER OF MENTION.

NON-LOCAL COMPETITION 1:_____

NON-LOCAL COMPETITION 2:_____

NON-LOCAL COMPETITION 3:_____

IF THERE ARE NO UNDOCUMENTED WORKERS AT THE FACTORY WHERE RESPONDANT WORKS, SKIP TO Q55.

51. Do you know when undocumented workers were first employed at your factory?

FIRST

UNDOCUMENTED:_____

A. Do you know the reason for the employment of undocumented workers at that time?

YES.....ASK Q51A1.....1

NO.....SKIP TO Q52.....2

1. What was the reason?

52. Since you've been there, has the factory where you work ever been raided by INS?

YES.....ASK Q52A.....1

NO.....SKIP TO Q53.....2

A. Why did INS raid the factory?

B. Describe what occurred during the (last) raid.

C. Was anyone apprehended?

YES.....ASK Q52C1.....1

NO.....SKIP TO Q53.....2

1. How many people were apprehended?

APPREHENSIONS:_____

2. Did any of the apprehended workers ever return to work at your factory?

YES.....SKIP TO Q53.....1

NO.....SKIP TO Q53.....2

DON'T KNOW.....8

53. How would you characterize, perhaps with an example, your employer's attitude toward the employment of undocumented workers?

54. Do undocumented workers and resident workers get along?

YES.....SKIP TO Q55.....1

NO.....2

A. Describe the situation.

55. What job do you hold?

RESPONDANT'S JOB:_____

56. How long have you worked at the factory?

TIME WORKING:_____

57. Are you undocumented?

YES.....1

NO.....2

58. Thank you for answering these questions. You have been very helpful. But before we end, is there anything you would like to add about your employer or about undocumented workers?

FEBRUARY 1981

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9	10	11	12 *Lincoln's Birthday*	13	14 *Valentine's Day*
15	16 *Washington's Birthday*	17	18	19	20	21
22	23	24	25	26	27	28

JANUARY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

MARCH

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JOB SHEET

Department or product manufactured or machine used	Job title	Sex (M or F)	Race W white A asian B black O other L latino	Average hourly earnings	Length of time on the job	Citizenship C citizen G greencard U undocumented

APPENDIX 2

APPENDIX 2

Table 1

Average Hourly Wage By Company By Worker Characteristics

Company	Variable	N	Average Wage	S.D.
1				
TOTAL		154	5.91	0.43
Sex *	1	132	5.94	0.43
	2	22	5.73	0.39
Citizenship**	1	24	6.11	0.38
	2	59	5.98	0.35
	3	71	5.78	0.47
Race***	1	25	6.18	0.37
	2	-	-	-
	3	128	5.85	0.42
	4	1	6.35	.
Union	No			
2				
TOTAL		113	4.08	0.46
Sex	1	98	4.09	0.47
	2	15	4.01	0.35
Citizenship	1	-	-	-
	2	-	-	-
	3	107	4.05	0.44
Race	1	-	-	-
	2	-	-	-
	3	113	4.08	0.46
	4	-	-	-
Union	No			
3				
TOTAL		259	10.89	0.04
Sex	1	255	10.89	0.04
	2	4	10.86	0.00
Citizenship	1	221	10.88	0.04
	2	38	10.91	0.05
	3	-	-	-
Race	1	57	10.91	0.05
	2	35	10.86	0.00
	3	166	10.88	0.04
	4	1	10.96	.
Union	Yes			
4				
TOTAL		113	6.35	1.15
Sex	1	-	6.35	1.15
	2	-	-	-
Citizenship	1	49	6.89	1.02
	2	46	6.19	1.11
	3	18	5.37	0.81
Race	1	42	7.06	0.89
	2	-	-	-
	3	64	5.86	1.06
	4	7	6.61	1.13
Union	No			
5				
TOTAL		205	4.32	0.53
Sex	1	205	4.32	0.53
	2	-	-	-
Citizenship	1	11	5.82	0.60
	2	71	4.39	0.40
	3	123	4.15	0.32
Race	1	10	6.00	0.00
	2	-	-	-
	3	194	4.24	0.37
	4	1	4.00	.
Union	Yes			
6				
TOTAL		122	6.89	1.20
Sex	1	-	-	-
	2	-	-	-
Citizenship	1	69	6.73	1.15
	2	12	6.47	0.40
	3	41	6.19	0.48
Race	1	7	7.79	1.29
	2	3	7.79	1.29
	3	112	6.79	1.15
	4	-	-	-
Union	No			
7				
TOTAL		10	4.25	1.00
Sex	1	10	4.25	1.00
	2	-	-	-
Citizenship	1	2	5.37	0.88
	2	-	-	-
	3	8	3.97	0.85
Race	1	-	-	-
	2	-	-	-
	3	10	4.25	1.00
	4	-	-	-
Union	No			
8				
TOTAL		18	3.35	0.00
Sex	1	18	3.35	0.00
	2	-	-	-
Citizenship	1	-	-	-
	2	-	-	-
	3	18	3.35	0.00
Race	1	1	3.35	.
	2	-	-	-
	3	17	3.35	0.00
	4	-	-	-
Union	No			
9				
TOTAL		74	3.69	0.74
Sex	1	62	3.75	0.79
	2	12	3.37	0.07
Citizenship	1	1	4.40	.
	2	1	4.40	.
	3	68	3.57	0.57
Race	1	1	4.40	.
	2	-	-	-
	3	73	3.68	0.74
	4	-	-	-
Union	No			

APPENDIX 2 Table 1 continued

Company	Variable	N	Average Wage	S.D.
19				
TOTAL		25	4.15	0.65
Sex	1	25	4.15	0.65
	2	-	-	-
Citizenship	1	2	4.25	0.71
	2	4	4.69	0.75
	3	19	4.03	0.60
Race	1	-	-	-
	2	-	-	-
	3	25	4.15	0.65
	4	-	-	-
Union	Yes			
20				
TOTAL		64	4.01	0.95
Sex	1	47	4.12	1.08
	2	17	3.69	0.25
Citizenship	1	2	4.07	0.11
	2	19	4.02	1.13
	3	43	4.00	0.91
Race	1	2	5.07	1.52
	2	-	-	-
	3	48	4.05	1.03
	4	14	3.68	0.28
Union	Yes			
21				
TOTAL		108	8.48	1.11
Sex	1	102	8.51	1.12
	2	6	7.92	0.74
Citizenship	1	108	8.48	1.11
	2	-	-	-
	3	-	-	-
Race	1	14	9.06	1.65
	2	-	-	-
	3	66	8.44	1.14
	4	-	-	-
Union	Yes			

* Sex: 1 = Male
2 = Female

** Citizenship:
1 = Citizen
2 = Greencard
3 = Undocumented

*** Race:
1 = Anglo
2 = Black
3 = Latino
4 = Asian and Other

APPENDIX 2 Table 1 continued

Company	Variable	N	Average Wage	S.D.
10				
TOTAL		46	4.00	0.91
Sex	1	40	4.07	0.96
	2	6	3.53	0.08
Citizenship	1	5	5.48	1.19
	2	-	-	-
	3	41	3.82	0.70
Race	1	1	5.35	.
	2	-	-	-
	3	45	3.97	0.90
	4	-	-	-
Union	Yes			
11				
TOTAL		83	6.40	0.95
Sex	1	83	6.40	0.95
	2	-	-	-
Citizenship	1	9	7.05	0.70
	2	32	6.74	0.63
	3	42	6.01	1.04
Race	1	-	-	-
	2	1	4.25	.
	3	82	6.43	0.93
	4	-	-	-
Union	Yes			
12				
TOTAL		113	9.19	1.61
Sex	1	110	9.22	1.61
	2	3	8.00	1.32
Citizenship	1	107	9.07	1.81
	2	6	9.75	1.29
	3	41	3.82	0.70
Race	1	26	9.38	1.58
	2	38	8.75	1.76
	3	46	9.43	1.45
	4	3	9.17	2.83
Union	Yes			
13				
TOTAL		185	11.40	1.22
Sex	1	181	11.40	1.23
	2	4	11.22	0.50
Citizenship	1	86	11.38	1.10
	2	99	11.42	1.32
	3	-	-	-
Race	1	28	11.63	0.90
	2	7	10.79	0.90
	3	149	11.39	1.28
	4	1	10.50	.
Union	Yes			
14				
TOTAL		98	5.09	0.81
Sex	1	98	5.09	0.81
	2	-	-	-
Citizenship	1	10	5.20	0.86
	2	57	5.15	0.88
	3	31	4.92	0.60
Race	1	1	5.00	.
	2	5	5.35	0.60
	3	91	5.05	0.80
	4	1	7.00	.
Union	Yes			
15				
TOTAL		93	4.94	0.66
Sex	1	81	4.95	0.69
	2	12	4.83	0.32
Citizenship	1	9	4.70	0.45
	2	25	5.34	1.00
	3	59	4.81	0.39
Race	1	-	-	-
	2	7	4.47	0.05
	3	80	4.96	0.63
	4	6	5.11	1.12
Union	Yes			
16				
TOTAL		44	4.34	1.50
Sex	1	38	4.40	1.59
	2	6	3.95	0.74
Citizenship	1	3	7.10	2.59
	2	10	5.04	1.65
	3	31	3.85	0.88
Race	1	-	-	-
	2	-	-	-
	3	44	4.34	1.50
	4	-	-	-
Union	No			
17				
TOTAL		55	4.73	1.83
Sex	1	55	4.73	1.83
	2	-	-	-
Citizenship	1	18	7.10	1.23
	2	-	-	-
	3	37	3.57	0.39
Race	1	18	7.10	1.23
	2	-	-	-
	3	37	3.57	0.39
	4	-	-	-
Union	Yes			
18				
TOTAL		339	5.85	1.80
Sex	1	308	5.93	1.87
	2	31	5.06	0.51
Citizenship	1	22	8.06	2.46
	2	68	6.86	1.99
	3	249	5.37	1.37
Race	1	21	8.37	2.60
	2	1	5.88	.
	3	303	5.68	1.60
	4	14	5.73	2.03
Union	Yes			

APPENDIX 2

Table 2

Average Hourly Years By Company By Worker Characteristics

Company	Variable	N	Average Years	S.D.
1				
TOTAL		154	6.35	2.09
Sex*	1	132	6.47	2.11
	2	22	5.66	1.90
Citizenship**	1	24	7.21	3.12
	2	59	6.94	2.14
	3	71	5.58	1.21
Race***	1	25	6.06	2.29
	2	-	-	-
	3	128	6.37	2.03
	4	1	11.00	.
2				
TOTAL		113	3.37	0.77
Sex	1	98	3.36	0.76
	2	15	3.47	0.83
Citizenship	1	-	-	-
	2	6	4.33	0.82
	3	107	3.32	0.73
Race	1	-	-	-
	2	-	-	-
	3	113	3.37	0.77
	4	-	-	-
3				
TOTAL		259	17.88	3.43
Sex	1	255	17.99	3.32
	2	4	11.00	3.46
Citizenship	1	221	17.66	3.36
	2	38	19.16	3.58
	3	-	-	-
Race	1	57	18.39	3.91
	2	35	16.54	1.65
	3	166	18.00	3.48
	4	1	16.00	.
4				
TOTAL		113	5.86	4.87
Sex	1	113	5.86	4.87
	2	-	-	-
Citizenship	1	49	7.54	5.77
	2	46	4.99	3.94
	3	18	3.50	2.23
Race	1	42	7.37	5.85
	2	-	-	-
	3	64	4.82	3.56
	4	7	6.32	6.94
5				
TOTAL		205	2.54	1.95
Sex	1	205	2.54	1.95
	2	-	-	-
Citizenship	1	11	4.62	5.07
	2	71	2.74	1.96
	3	123	2.24	1.25
Race	1	10	5.07	5.11
	2	-	-	-
	3	194	2.43	1.56
	4	1	0.17	.
6				
TOTAL		122	4.26	1.64
Sex	1	122	4.26	1.64
	2	-	-	-
Citizenship	1	69	3.88	1.53
	2	12	4.56	3.08
	3	41	4.80	1.01
Race	1	7	2.71	2.14
	2	3	3.67	2.31
	3	112	4.37	1.56
	4	-	-	-
7				
TOTAL		10	2.52	3.09
Sex	1	10	2.52	3.09
	2	-	-	-
Citizenship	1	2	5.37	6.54
	2	-	-	-
	3	8	1.81	1.81
Race	1	-	-	-
	2	-	-	-
	3	10	2.52	3.09
	4	-	-	-
8				
TOTAL		18	0.08	0
Sex	1	18	0.08	0
	2	-	-	-
Citizenship	1	-	-	-
	2	-	-	-
	3	18	0.08	0
Race	1	1	0.08	.
	2	-	-	-
	3	17	0.08	0
	4	-	-	-
9				
TOTAL		74	2.24	1.87
Sex	1	62	2.27	2.00
	2	12	2.12	0.98
Citizenship	1	1	0.50	.
	2	5	4.80	3.83
	3	68	2.08	1.54
Race	1	1	0.50	.
	2	-	-	-
	3	73	2.27	1.87
	4	-	-	-

APPENDIX 2 Table 2 continued

Company	Variable	N	Average Years	S.D.
10				
TOTAL		46	3.75	3.93
Sex	1	40	4.22	4.01
	2	6	0.57	0.24
Citizenship	1	5	11.00	2.92
	2	-	-	-
	3	41	2.86	3.03
Race	1	1	10.00	.
	2	-	-	-
	3	45	3.61	3.86
	4	-	-	-
11				
TOTAL		83	3.43	2.43
Sex	1	83	3.43	2.43
	2	-	-	-
Citizenship	1	9	7.33	2.00
	2	32	4.12	1.62
	3	42	2.06	1.85
Race	1	-	-	-
	2	1	0.50	.
	3	82	3.46	2.43
	4	-	-	-
12				
TOTAL		113	9.88	8.42
Sex	1	110	10.02	8.48
	2	3	4.67	3.51
Citizenship	1	107	9.70	8.32
	2	6	13.17	10.42
	3	-	-	-
Race	1	26	12.00	8.96
	2	38	6.51	4.67
	3	46	11.13	9.81
	4	3	15.00	5.33
13				
TOTAL		185	6.19	3.72
Sex	1	181	6.19	3.75
	2	4	6.00	2.94
Citizenship	1	86	6.47	4.08
	2	99	5.95	3.39
	3	-	-	-
Race	1	28	8.16	5.83
	2	7	4.43	1.24
	3	149	5.90	3.16
	4	1	6.00	.
14				
TOTAL		98	6.03	6.81
Sex	1	98	6.03	6.81
	2	-	-	-
Citizenship	1	10	16.35	13.82
	2	57	5.77	4.49
	3	31	3.17	3.29
Race	1	1	4.00	.
	2	5	27.80	5.40
	3	91	4.83	4.56
	4	1	8.00	.
15				
TOTAL		93	3.04	1.88
Sex	1	81	3.20	1.93
	2	12	1.92	0.95
Citizenship	1	9	0.41	0.08
	2	25	2.70	1.97
	3	59	3.58	1.60
Race	1	-	-	-
	2	7	0.43	0.07
	3	80	3.44	1.67
	4	6	0.75	1.59
16				
TOTAL		44	1.99	1.99
Sex	1	38	1.94	1.98
	2	6	2.33	2.23
Citizenship	1	3	2.33	2.31
	2	10	2.62	2.75
	3	31	1.76	1.70
Race	1	-	-	-
	2	-	-	-
	3	44	1.99	1.99
	4	-	-	-
17				
TOTAL		55	2.60	1.49
Sex	1	55	2.60	1.49
	2	-	-	-
Citizenship	1	18	4.11	0.80
	2	-	-	-
	3	37	1.87	1.15
Race	1	18	4.11	0.80
	2	-	-	-
	3	37	1.87	1.15
	4	-	-	-
18				
TOTAL		339	5.05	5.24
Sex	1	308	5.01	5.33
	2	31	5.48	4.22
Citizenship	1	22	7.27	7.23
	2	68	9.05	6.84
	3	249	3.77	3.72
Race	1	21	8.40	7.14
	2	1	5.00	.
	3	303	4.92	5.05
	4	14	2.83	4.30

APPENDIX 2 Table 2 continued

Company	Variable	N	Average Years	S.D.	Company	Variable	N	Average Years	S.D.	Company	Variable	N	Average Years	S.D.
19					20					21				
TOTAL		25	2.46	1.91	TOTAL		64	2.81	2.64	TOTAL		108	11.04	5.11
Sex	1	25	2.46	1.91	Sex	1	47	3.11	2.72	Sex	1	102	11.10	5.02
	2	-	-	-		2	17	1.97	2.23		2	6	10.00	7.01
Citizenship	1	2	1.75	1.06	Citizenship	1	2	5.50	4.95	Citizenship	1	108	11.04	5.11
	2	4	4.62	2.36		2	19	2.22	2.57		2	-	-	-
	3	19	2.07	1.61		3	43	2.94	2.55		3	-	-	-
Race	1	-	-	-	Race	1	2	2.75	1.06	Race	1	14	10.36	5.27
	2	-	-	-		2	-	-	-		2	28	11.14	4.73
	3	25	2.46	1.91		3	48	3.24	2.89		3	66	11.14	5.30
	4	-	-	-		4	14	1.34	0.62		4	-	-	-

APPENDIX 3

APPENDIX 3 AND 4 REFERENCE

1970 Census Code	Standard Occupational Classification
374	Shipping and Receiving Clerks
413	Cabinetmakers
415	Carpenters
424	Cranemen, Derrickmen, and Hoistmen
430	Electricians
440	Floor Layers
441	Foremen
443	Furniture and Wood Finishers
446	Heat Treaters, Annealers, and Temperers
461	Machinists
481	Heavy Equipment Mechanics
492	Miscellaneous Mechanics and Repairmen
502	Millwrights
503	Molders (metal)
522	Plumbers and Pipefitters
534	Roofers and Slaters
602	Assemblers
610	Inspectors (manufacturing)
612	Cutting Operators
615	Dry Wall Installers
620	Dyers
621	Filers, Polishers, Sanders, and Buffers
622	Furnacemen, Smeltermen, and Pourers
643	Packers and Wrappers
644	Painters (manufactured articles)
650	Drill Press Operators
651	Grinding Machine Operators
652	Lathe Operators
653	Precision Machine Operators
656	Punch Press Operators
665	Solderers
680	Welders and Flame-Cutters
690	Machine Operators (miscellaneous)
692	Machine Operators (not specified)
705	Deliverymen
706	Forklift Operators
710	Motormen
715	Truck Drivers
753	Freight and Material Handlers
762	Stockhandlers
770	Warehousemen
780	Miscellaneous Laborers
903	Janitors
962	Guards

APPENDIX 3

Table 1

Average Hourly Wage and Years on the Job by Occupation for Each Case Study Company

Company	Occupation	Average Hourly Wage		Average Years on the Job		N
		Mean	S.D.	Mean	S.D.	
A 4 (Wheels)	430	6.00	0.00	1.00	0.00	2
	446	4.17	0.00	2.80	1.55	10
	492	6.00	0.00	11.00	0.00	4
	610	4.80	0.00	3.00	0.00	3
	622	4.20	0.24	2.58	0.00	60
	643	3.70	0.00	1.17	0.00	30
	644	4.50	0.00	2.31	2.40	3
	650	5.00	0.00	3.00	0.00	3
	653	5.00	0.00	3.00	0.00	3
	680	5.07	0.92	2.72	2.21	3
	692	4.47	0.00	2.82	2.27	66
	705	6.00	0.00	1.17	0.00	4
	706	4.00	0.00	2.00	0.00	3
	780	3.75	0.00	1.71	1.72	11
B 6 (Wheels)	430	9.17	0.00	5.00	0.00	3
	492	9.17	0.00	5.00	0.00	22
	602	6.12	0.00	4.33	0.00	20
	622	6.23	0.06	4.02	0.93	30
	644	6.75	0.00	1.00	0.00	7
	680	6.54	0.39	4.41	2.73	27
	692	5.85	0.00	4.33	0.00	10
	780	6.35	0.00	6.00	2.00	3
C 10 (Headers)	446	6.15	0.00	5.50	0.52	12
	612	5.01	1.04	2.33	2.92	12
	644	5.75	0.52	2.50	1.43	10
	680	7.40	0.00	3.53	2.98	31
	690	6.15	0.00	3.11	1.28	18
D 8 (Headers)	441	4.40	1.82	1.83	0.29	3
	446	3.59	0.41	3.28	1.95	9
	492	5.32	1.31	1.25	1.06	2
	602	3.39	0.02	1.33	0.25	9
	612	3.57	0.38	4.67	5.51	3
	621	5.32	0.08	2.25	1.84	6
	644	3.35	0.00	1.50	0.50	3
	651	3.35	0.00	2.92	3.06	6
	680	3.62	0.67	3.08	1.32	6
	692	3.35	0.00	1.47	0.13	15
	706	3.35	.	0.50	.	1
	753	3.41	0.12	2.75	1.26	4
	762	3.35	0.00	0.50	0.00	3
	770	3.57	0.31	3.37	1.89	4

APPENDIX 3 Table 1 continued

Company	Occupation	Average Hourly Wage		Average Years on the Job		N
		Mean	S.D.	Mean	S.D.	
E 9 (Headers)	446	4.12	0.68	5.11	4.13	9
	492	7.50	0.00	13.50	2.12	2
	602	3.52	0.07	1.52	1.49	9
	644	3.50	0.00	4.50	2.12	2
	680	4.01	0.55	3.85	3.27	13
	706	4.05	0.62	4.73	4.57	5
	780	3.50	0.00	0.50	0.00	6
F 11 (Batteries)	446	11.00	0.00	15.50	6.36	2
	492	8.50	0.00	15.00	0.00	8
	502	9.00	0.00	3.33	2.52	3
	503	11.56	1.24	6.61	7.09	9
	602	9.54	0.40	6.08	6.65	12
	610	7.00	0.00	3.00	0.00	4
	690	8.14	1.00	6.73	5.50	22
	692	8.50	0.55	2.17	1.94	6
	715	7.00	0.00	6.00	0.00	7
	753	10.83	1.15	17.33	10.02	3
	762	7.00	.	5.00	.	1
	780	10.31	0.92	16.72	9.47	32
	903	6.50	0.00	4.00	0.00	4
G 12 (Batteries)	481	11.40	0.85	1.50	0.71	2
	492	11.50	0.52	7.66	2.52	16
	503	14.00	0.00	9.00	5.68	14
	610	11.46	0.19	6.85	1.11	10
	680	10.50	0.00	6.82	1.22	22
	690	11.95	0.14	3.54	1.45	13
	715	13.00	0.00	8.52	5.34	20
	753	10.51	1.03	5.58	4.43	19
	770	10.68	0.17	2.58	2.02	12
	780	10.82	0.85	5.64	2.82	57
H 13 (Batteries)	446	4.75	0.00	5.50	0.58	4
	492	6.79	0.19	9.80	5.76	5
	503	6.10	0.82	7.44	7.82	9
	602	4.69	0.19	6.62	5.45	21
	610	4.60	0.14	4.60	2.30	5
	644	5.00	.	8.00	.	1
	690	5.05	0.45	8.83	11.69	13
	706	5.00	0.00	3.67	0.58	3
	715	6.95	0.27	8.20	2.17	5
	753	4.70	0.28	3.00	1.41	2
	762	4.50	0.00	0.25	0.00	9
	780	4.79	0.24	5.31	7.67	18
	903	4.25	0.00	4.00	1.00	3

APPENDIX 3

Table 2

Average Hourly Wage By Occupation and Citizenship For Each Case Study Company

Company	Occupation	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Wage	S.D.	N	Av. Wage	S.D.	N	Av. Wage	S.D.
A	430	2	6.00	0.00	-	-	-	-	-	-
(Wheels)	446	-	-	-	6	4.17	0.00	4	4.17	0.00
	492	4	6.00	0.00	-	-	-	-	-	-
	610	-	-	-	3	4.80	0.00	-	-	-
	622	-	-	-	4	4.63	0.91	56	4.17	0.00
	643	-	-	-	9	3.70	0.00	21	3.70	0.00
	644	-	-	-	-	-	-	3	4.50	0.00
	650	-	-	-	-	-	-	3	5.00	0.00
	653	-	-	-	9	-	-	3	5.00	0.00
	680	1	4.00	.	2	5.60	0.00	-	-	-
	692	-	-	-	46	4.47	0.00	20	4.47	0.00
	705	4	6.00	0.00	-	-	-	-	-	-
	706	-	-	-	1	4.00	.	2	4.00	0.00
	780	-	-	-	1	-	-	11	3.75	0.00
B	430	3	9.17	0.00	-	-	-	-	-	-
(Wheels)	492	9	9.17	0.00	-	-	-	13	9.17	0.00
	602	15	6.12	0.00	-	-	-	5	6.12	0.00
	622	22	6.23	0.07	-	-	-	8	6.24	0.02
	644	7	6.75	0.00	-	-	-	-	-	-
	680	5	6.19	0.45	12	6.47	0.40	10	6.80	0.11
	692	7	5.85	0.00	-	-	-	3	5.85	0.00
	780	1	6.35	.	-	-	-	2	6.35	0.00
C	446	-	-	-	6	6.15	0.00	6	6.15	0.00
(Headers)	612	1	8.00	.	-	-	-	11	4.74	0.47
	644	-	-	-	6	6.15	0.00	4	5.15	0.00
	680	5	7.40	0.00	15	7.40	0.00	11	7.40	0.00
	690	3	6.15	0.00	5	6.15	0.00	10	6.15	0.00
D	441	-	-	-	1	6.50	.	2	3.35	0.00
(Headers)	446	-	-	-	-	-	-	9	3.59	0.41
	492	1	4.40	.	1	6.25	.	-	-	-
	602	-	-	-	-	-	-	9	3.39	0.02
	612	-	-	-	1	4.00	.	2	3.35	0.00
	621	-	-	-	1	5.15	.	5	5.35	0.00
	644	-	-	-	-	-	-	3	3.35	0.00
	651	-	-	-	-	-	-	6	3.35	0.00
	680	-	-	-	-	-	-	6	3.62	0.67
	692	-	-	-	-	-	-	15	3.35	0.00
	706	-	-	-	-	-	-	1	3.35	.
	753	-	-	-	1	3.60	.	3	3.35	0.00
	762	-	-	-	-	-	-	3	3.35	0.00
	770	-	-	-	-	-	-	4	3.57	0.31

APPENDIX 3 Table 2 continued

Company	Occupation	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Wage	S.D.	N	Av. Wage	S.D.	N	Av. Wage	S.D.
E (Headers)	446	3	4.85	0.43	-	-	-	6	3.75	0.43
	492	1	7.50	.	-	-	-	1	7.50	.
	602	-	-	-	-	-	-	9	3.52	0.07
	644	-	-	-	-	-	-	2	3.50	0.00
	680	1	5.35	.	-	-	-	12	3.89	0.39
	706	-	-	-	-	-	-	5	4.05	0.62
	780	-	-	-	-	-	-	6	3.50	0.00
F (Batteries)	446	2	11.00	0.00	-	-	-	-	-	-
	492	8	8.50	0.00	-	-	-	-	-	-
	502	3	9.00	0.00	-	-	-	-	-	-
	503	8	11.62	1.30	1	11.00	.	-	-	-
	602	10	9.60	0.39	2	9.25	0.35	-	-	-
	610	4	7.00	0.00	-	-	-	-	-	-
	690	21	8.14	1.03	1	8.00	.	-	-	-
	692	6	8.50	0.55	-	-	-	-	-	-
	715	7	7.00	0.00	-	-	-	-	-	-
	753	2	10.50	1.41	1	11.50	.	-	-	-
	762	1	7.00	.	-	-	-	-	-	-
	780	31	10.34	0.93	1	9.50	.	-	-	-
	903	4	6.50	0.00	-	-	-	-	-	-
G (Batteries)	481	2	11.40	0.85	-	-	-	-	-	-
	492	13	11.62	0.51	3	11.00	0.00	-	-	-
	503	-	-	-	14	14.00	0.00	-	-	-
	610	1	11.40	.	9	11.47	0.20	-	-	-
	680	19	10.50	0.00	3	10.50	0.00	-	-	-
	690	2	12.00	0.00	11	11.94	0.16	-	-	-
	715	18	13.00	0.00	2	13.00	0.00	-	-	-
	752	1	11.60	.	-	-	-	-	-	-
	753	8	10.06	1.36	10	10.76	0.58	-	-	-
	770	5	10.75	0.27	7	10.63	0.00	-	-	-
	780	17	11.16	0.63	40	10.68	0.89	-	-	-
H (Batteries)	446	-	-	-	2	4.75	0.00	2	4.75	0.00
	492	1	7.00	.	4	6.74	0.17	-	-	-
	503	1	5.00	.	4	6.24	0.82	4	6.24	0.82
	602	1	4.75	.	10	4.62	0.17	10	4.74	0.20
	610	-	-	-	5	4.60	0.14	-	-	-
	644	-	-	-	1	5.00	.	-	-	-
	690	2	6.00	0.00	7	4.85	0.19	4	4.94	0.12
	706	-	-	-	3	5.00	0.00	-	-	-
	715	-	-	-	5	6.95	0.27	-	-	-
	753	-	-	-	2	4.70	0.28	-	-	-
	762	2	4.50	0.00	3	4.50	0.00	4	4.50	0.00
	780	2	5.00	0.00	9	4.79	0.25	7	4.73	0.26
	903	1	4.25	.	2	4.25	0.00	-	-	-

APPENDIX 3

Table 3

Average Years on the Job by Occupation and Citizenship
For Each Case Study Company

Company	Occupation	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Years	S.D.	N	Av. Years	S.D.	N	Av. Years	S.D.
A	430	2	1.00	0.00	-	-	-	-	-	-
(Wheels)	446	-	-	-	6	4.00	0.00	4	1.00	0.00
	492	4	11.00	0.00	-	-	-	-	-	-
	610	-			3	3.00	0.00	-	-	-
	622	-	-	-	4	2.58	0.00	56	2.58	0.00
	643	-	-	-	9	1.17	0.00	21	1.17	0.00
	644	-	-	-	-	-	-	3	2.31	2.40
	650	-	-	-	-	-	-	3	3.00	0.00
	653	-	-	-	-	-	-	3	3.00	0.00
	680	1	0.17	.	2	4.00	0.00	-	-	-
	692	-	-	-	46	2.85	2.27	20	2.75	2.31
	705	4	1.17	0.00	-	-	-	20	-	-
	706	-	-	-	1	2.00	.	2	2.00	0.00
	780	-	-	-	-	-	-	11	1.71	1.72
B	430	3	5.00	0.00	-	-	-	-	-	-
(Wheels)	492	9	5.00	0.00	-	-	-	13	5.00	0.00
	602	15	4.33	0.00	-	-	-	5	4.33	0.00
	622	22	4.02	0.98	-	-	-	8	4.04	0.82
	644	7	1.00	0.00	-	-	-	-	-	-
	680	5	2.27	3.29	12	4.56	3.08	10	5.30	1.32
	692	7	4.33	0.00	-	-	-	3	4.33	0.00
	780	1	6.00	.	-	-	-	2	6.00	2.83
C	446	-	-	-	6	5.00	0.00	6	6.00	0.00
(Headers)	612	1	11.00	.	-	-	-	11	1.55	1.10
	644	-	-	-	6	3.50	0.84	4	1.00	0.00
	680	5	8.00	0.00	15	4.13	2.20	11	0.67	0.51
	690	3	5.00	0.00	5	3.80	0.84	10	2.20	0.63
D	441	-	-	-	1	2.00	.	2	1.75	0.35
(Headers)	446	-	-	-	-	-	-	9	3.28	1.95
	492	1	0.50	.	1	2.00	.	-	-	-
	602	-	-	-	-	-	-	9	1.33	0.25
	612	-	-	-	1	11.00	.	2	1.50	0.70
	621	-	-	-	1	6.00	.	5	1.50	0.00
	644	-	-	-	-	-	-	3	1.50	0.50
	651	-	-	-	-	-	-	6	2.92	3.06
	680	-	-	-	-	-	-	6	3.08	1.32
	692	-	-	-	-	-	-	15	1.47	0.13
	706	-	-	-	-	-	-	1	0.50	.
	753	-	-	-	1	3.00	.	3	2.67	1.53
	762	-	-	-	-	-	-	3	0.50	0.00
	770	-	-	-	-	-	-	4	3.37	1.89

APPENDIX 3 Table 3 continued

Company	Occupation	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Years	S.D.	N	Av. Years	S.D.	N	Av. Years	S.D.
E	446	-	9.67	2.52	-	-	-	6	2.83	2.46
(Headers)	492	1	15.00	.	-	-	-	1	12.00	.
	602	-	-	-	-	-	-	9	1.52	1.49
	644	-	-	-	-	-	-	2	4.50	2.12
	680	1	11.00	.	-	-	-	12	3.26	2.58
	706	-	-	-	-	-	-	5	4.73	4.57
	780	-	-	-	-	-	-	6	0.50	0.00
F	446	2	15.50	6.36	-	-	-	-	-	-
(Batteries)	492	8	15.00	0.00	-	-	-	-	-	-
	502	3	3.33	2.52	-	-	-	-	-	-
	503	8	7.19	7.35	1	2.00	.	-	-	-
	602	10	3.80	2.62	2	17.50	10.61	-	-	-
	610	4	3.00	0.00	-	-	-	-	-	-
	690	21	6.95	5.53	1	2.00	.	-	-	-
	692	6	2.17	1.94	-	-	-	-	-	-
	715	7	6.00	0.00	-	-	-	-	-	-
	753	2	13.50	10.61	1	25.00	.	-	-	-
	762	1	5.00	.	-	-	-	-	-	-
	780	31	16.77	9.62	1	15.00	.	-	-	-
	903	4	4.00	0.00	-	-	-	-	-	-
G	481	2	1.50	0.71	-	-	-	-	-	-
(Batteries)	492	13	7.92	2.74	3	6.50	0.00	-	-	-
	503	-	-	-	14	9.00	5.68	-	-	-
	610	1	6.50	.	9	6.89	1.17	-	-	-
	680	19	6.71	1.28	3	7.50	0.00	-	-	-
	690	2	3.00	0.00	11	3.64	1.57	-	-	-
	715	18	8.81	5.58	2	6.00	0.00	-	-	-
	752	1	10.00	.	-	-	-	-	-	-
	753	8	3.75	5.02	10	6.60	3.66	-	-	-
	770	5	3.40	3.13	7	2.00	0.00	-	-	-
	780	17	5.56	3.70	40	5.67	2.41	-	-	-
H	446	-	-	-	2	5.50	0.71	2	5.50	0.71
(Batteries)	492	1	20.00	.	4	7.25	0.96	-	-	-
	503	1	25.00	.	4	9.25	0.96	4	1.25	1.87
	602	1	20.00	.	10	6.72	5.69	10	5.19	3.36
	610	-	-	-	5	4.60	2.30	-	-	-
	644	-	-	-	1	8.00	.	-	-	-
	690	2	30.00	0.00	7	7.46	8.77	4	0.62	0.25
	706	-	-	-	3	3.67	0.58	-	-	-
	715	-	-	-	5	8.20	2.17	-	-	-
	753	-	-	-	2	3.00	1.41	-	-	-
	762	2	0.25	0.00	3	0.25	0.00	4	0.25	0.00
	780	2	17.50	23.33	9	3.72	2.20	7	3.86	3.70
	903	1	3.00	.	2	4.50	0.71	-	-	-

APPENDIX 4

APPENDIX 4

Table 1

Average Hourly Wage and Years on the Job by Occupation for 21 Firms (A), for Wheels, Headers and Batteries (B), and Non-Wheels, Headers and Batteries Firms (C)

Occupation	Code	N	Average Hourly Wage		Average Years on the Job	
			Mean	S.D.	Mean	S.D.
374	A	8	7.30	1.71	7.81	3.80
	B	-	-	-	-	-
	C	8	7.30	1.71	7.81	3.80
413	A	41	4.53	1.02	3.22	0.99
	B	-	-	-	-	-
	C	8	5.76	0.52	7.69	1.75
415	A	8	5.76	0.52	7.69	1.75
	B	-	-	-	-	-
	C	8	5.76	0.52	7.69	1.75
424	A	3	4.25	0.43	3.83	3.69
	B	-	-	-	-	-
	C	3	4.25	0.43	3.83	3.69
430	A	14	7.99	2.52	5.96	3.30
	B	5	7.90	1.74	3.40	2.19
	C	9	8.04	2.97	7.39	2.99
440	A	19	6.26	0.16	6.21	0.92
	B	-	-	-	-	-
	C	19	6.26	0.16	6.21	0.92
441	A	30	5.18	0.76	5.70	2.15
	B	-	-	-	-	-
	C	30	5.18	0.76	5.70	2.15
443	A	30	5.18	0.76	5.70	2.15
	B	-	-	-	-	-
	C	30	5.18	0.76	5.70	2.15
446	A	46	4.91	1.66	4.84	3.44
	B	46	4.91	1.66	4.84	3.44
	C	-	-	-	-	-
461	A	38	8.36	1.79	7.71	6.49
	B	-	-	-	-	-
	C	38	8.36	1.79	7.71	6.49
481	A	2	11.40	0.85	1.50	0.71
	B	2	11.40	0.85	1.50	0.71
	C	-	-	-	-	-

APPENDIX 4 Table 1 continued

Occupation	Code	N	Average Hourly Wage		Average Years on the Job	
			Mean	S.D.	Mean	S.D.
492	A	185	8.78	2.14	11.28	8.69
	B	59	9.11	1.86	8.05	4.21
	C	126	8.62	2.24	12.79	9.78
502	A	23	6.40	1.05	6.15	2.43
	B	3	9.00	0.00	3.33	2.52
	C	20	6.01	0.24	6.57	2.17
503	A	35	11.16	3.28	8.23	7.06
	B	32	11.09	3.42	7.89	6.59
	C	3	11.85	0.74	11.83	12.35
522	A	15	4.87	1.13	5.07	2.63
	B	-	-	-	-	-
	C	15	4.87	1.13	5.07	2.63
534	A	10	6.03	0.11	6.20	0.63
	B	-	-	-	-	-
	C	10	6.03	0.11	6.20	0.63
602	A	330	5.68	2.13	5.43	5.26
	B	71	5.60	2.05	4.57	4.46
	C	259	5.70	2.16	5.66	5.44
610	A	53	7.12	2.35	5.73	4.06
	B	22	8.18	3.18	5.11	2.13
	C	31	6.36	1.03	6.17	4.99
612	A	15	4.72	1.11	2.80	3.46
	B	15	4.72	1.11	2.80	3.46
	C	-	-	-	-	-
615	A	24	5.10	0.92	4.92	2.00
	B	-	-	-	-	-
	C	24	5.10	0.92	4.92	2.00
620	A	10	5.27	0.85	4.60	1.07
	B	-	-	-	-	-
	C	10	5.27	0.85	4.60	1.07
621	A	31	4.04	0.74	1.96	1.65
	B	16	4.09	0.98	0.90	1.52
	C	15	3.99	0.38	3.10	0.81
622	A	92	4.91	1.01	3.22	1.36
	B	90	4.88	0.98	3.06	0.86
	C	2	6.46	1.19	10.25	0.35
643	A	77	4.32	0.92	3.16	3.37
	B	30	3.70	0.00	1.17	0.00
	C	47	4.71	0.99	4.43	3.82

APPENDIX 4 Table 1 continued

Occupation	Code	N	Average Hourly Wage		Average Years on the Job	
			Mean	S.D.	Mean	S.D.
644	A	64	5.40	1.51	4.15	4.13
	B	26	5.40	1.25	2.32	1.91
	C	38	5.41	1.68	5.41	4.76
650	A	3	5.00	0.00	3.00	0.00
	B	3	5.00	0.00	3.00	0.00
	C	-	-	-	-	-
651	A	22	7.14	3.56	7.20	4.79
	B	6	3.35	0.00	2.92	3.06
	C	16	8.56	3.13	8.81	4.34
652	A	12	7.54	1.21	4.00	0.90
	B	-	-	-	-	-
	C	12	7.54	1.21	4.00	0.90
653	A	3	5.00	0.00	3.00	0.00
	B	3	5.00	0.00	3.00	0.00
	C	-	-	-	-	-
656	A	28	4.82	1.84	3.95	2.93
	B	-	-	-	-	-
	C	28	4.82	1.84	3.95	2.93
665	A	18	7.58	3.89	11.15	10.18
	B	8	3.35	0.00	0.08	0.00
	C	10	10.96	0.00	20.00	0.00
680	A	350	8.80	2.61	11.10	6.42
	B	102	7.12	2.19	4.46	2.84
	C	248	9.49	2.46	13.83	5.41
690	A	189	5.69	2.18	3.97	5.00
	B	66	7.74	2.47	5.53	6.39
	C	123	4.58	0.76	3.14	3.85
692	A	107	4.65	1.16	2.71	2.15
	B	107	4.65	1.16	2.71	2.15
	C	-	-	-	-	-
705	A	4	6.00	0.00	1.17	0.00
	B	4	6.00	0.00	1.17	0.00
	C	-	-	-	-	-
706	A	18	4.13	0.68	3.16	2.62
	B	12	4.21	0.63	3.43	3.13
	C	6	3.95	0.80	2.61	1.14
710	A	2	6.50	1.77	6.50	7.78
	B	-	-	-	-	-
	C	2	6.50	1.77	6.50	7.78

APPENDIX 4 Table 1 continued

Occupation	Code	N	Average Hourly Wage		Average Years on the Job	
			Mean	S.D.	Mean	S.D.
715	A	33	10.60	3.02	7.79	4.38
	B	32	10.74	2.96	7.92	4.38
	C	1	6.15	.	3.50	.
753	A	35	8.40	3.04	5.74	5.80
	B	28	9.11	2.98	6.25	6.18
	C	7	5.55	1.11	3.68	3.75
762	A	50	5.20	1.05	3.67	3.80
	B	13	4.43	0.92	0.67	1.30
	C	37	5.47	0.96	4.73	3.83
770	A	59	6.61	2.27	4.06	3.22
	B	16	8.90	3.18	2.78	1.96
	C	43	5.76	0.87	4.53	3.48
780	A	193	7.92	2.88	7.26	7.31
	B	127	8.77	3.00	7.81	7.93
	C	66	6.26	1.71	6.19	5.85
903	A	17	4.73	1.10	2.76	1.55
	B	7	5.54	1.20	4.00	0.58
	C	10	4.16	0.57	1.90	1.43
962	A	2	5.50	0.00	3.00	0.00
	B	-	-	-	-	-
	C	2	5.50	0.00	3.00	0.00

APPENDIX 4

Table 2

Average Hourly Wage by Occupation and Citizenship for 21 Firms (A), for Wheels, Headers and Batteries (B), and Non-Wheels, Headers and Batteries Firms (C)

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Wage	S.D.	N	Av. Wage	S.D.	N	Av. Wage	S.D.
374	A	7	7.46	1.78	1	6.16	.	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	7	7.46	1.78	1	6.16	.	-	-	-
413	A	3	6.18	0.14	3	6.10	0.00	35	4.26	0.83
	B	-	-	-	-	-	-	-	-	-
	C	3	6.18	0.14	3	6.10	0.00	35	4.26	0.83
415	A	2	6.35	0.00	1	6.35	.	5	5.40	0.22
	B	-	-	-	-	-	-	-	-	-
	C	2	6.35	0.00	1	6.35	.	5	5.40	0.22
424	A	1	3.75	.	1	4.50	.	1	4.50	.
	B	-	-	-	-	-	-	-	-	-
	C	1	3.75	.	1	4.50	.	1	4.50	.
430	A	8	9.44	2.49	6	6.06	0.14	-	-	-
	B	5	7.90	1.74	-	-	-	-	-	-
	C	3	12.00	0.00	6	6.06	0.14	-	-	-
440	A	2	6.35	0.00	4	6.35	0.00	13	6.22	0.18
	B	-	-	-	-	-	-	-	-	-
	C	2	6.35	0.00	4	6.35	0.00	13	6.22	0.18
441	A	-	-	-	1	6.50	.	2	3.35	0.00
	B	-	-	-	1	6.50	.	2	3.35	0.00
	C	-	-	-	-	-	-	-	-	-
443	A	2	6.17	0.25	15	5.30	0.58	13	4.88	0.85
	B	-	-	-	-	-	-	-	-	-
	C	2	6.17	0.25	15	5.30	0.58	13	4.88	0.85
446	A	5	7.31	3.38	14	5.10	0.96	27	4.37	1.07
	B	5	7.31	3.38	14	5.10	0.96	27	4.37	1.07
	C	-	-	-	-	-	-	-	-	-
461	A	23	8.65	1.62	6	7.06	2.23	9	8.50	1.71
	B	-	-	-	-	-	-	-	-	-
	C	23	8.65	1.62	6	7.06	2.23	9	8.50	1.71
481	A	2	11.40	0.85	-	-	-	-	-	-
	B	2	11.40	0.85	-	-	-	-	-	-
	C	-	-	-	-	-	-	-	-	-

APPENDIX 4 Table 2 continued

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Wage	S.D.	N	Av. Wage	S.D.	N	Av. Wage	S.D.
492	A	84	9.67	1.94	44	9.05	1.74	57	7.26	1.84
	B	37	9.31	2.07	8	8.27	2.27	14	9.05	0.45
	C	47	9.95	1.83	36	9.22	1.59	43	6.68	1.74
502	A	7	7.39	1.52	8	6.10	0.22	8	5.84	0.13
	B	3	9.00	0.00	-	-	-	-	-	-
	C	4	6.17	0.29	8	6.10	0.22	8	5.84	0.13
503	A	11	11.14	2.33	20	12.15	3.18	4	6.24	0.82
	B	9	10.89	2.52	19	12.21	3.26	4	6.24	0.82
	C	2	12.28	0.11	1	11.00	.	-	-	-
522	A	-	-	-	7	5.82	0.90	8	4.03	0.39
	B	-	-	-	-	-	-	-	-	-
	C	-	-	-	7	5.82	0.90	8	4.03	0.39
534	A	-	-	-	3	6.12	0.20	7	6.00	0.00
	B	-	-	-	-	-	-	-	-	-
	C	-	-	-	3	6.12	0.20	7	6.00	0.00
602	A	105	7.95	2.01	72	5.12	1.50	153	4.38	0.81
	B	26	7.41	1.80	12	5.39	1.81	33	4.25	0.99
	C	79	8.13	2.06	60	5.07	1.44	120	4.42	0.75
610	A	12	7.26	1.75	32	7.44	2.71	9	5.79	0.85
	B	5	7.88	1.97	17	8.27	3.50	-	-	-
	C	7	6.82	1.58	15	6.49	0.68	9	5.79	0.85
612	A	1	8.00	.	1	4.00	.	13	4.53	0.68
	B	1	8.00	.	1	4.00	.	13	4.53	0.68
	C	-	-	-	1	-	-	-	-	-
615	A	3	6.35	0.00	4	5.75	0.29	17	4.73	0.81
	B	-	-	-	-	-	-	-	-	-
	C	3	6.35	0.00	4	5.75	0.29	17	4.73	0.81
620	A	3	4.92	0.14	3	5.42	1.15	4	5.44	1.03
	B	-	-	-	-	-	-	-	-	-
	C	3	4.92	0.14	3	5.42	1.15	4	5.44	1.03
621	A	-	-	-	2	4.55	0.85	29	4.01	0.74
	B	-	-	-	1	5.15	.	15	4.02	0.96
	C	-	-	-	1	3.95	.	14	4.00	0.39
622	A	22	6.23	0.07	4	4.63	0.91	66	4.49	0.78
	B	22	6.23	0.07	4	4.63	0.91	64	4.43	0.69
	C	-	-	-	-	-	-	2	6.46	1.19
643	A	2	6.02	1.38	18	4.41	0.88	57	4.23	0.87
	B	-	-	-	9	3.70	0.00	21	3.70	0.00
	C	2	6.02	1.38	9	5.12	0.73	36	4.53	0.97
644	A	15	7.42	0.65	14	5.78	0.68	35	4.39	0.98
	B	7	6.74	0.00	7	5.99	0.43	12	4.26	0.80
	C	8	8.00	0.00	7	5.57	0.85	23	4.46	1.08

APPENDIX 4 Table 2 continued

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Wage	S.D.	N	Av. Wage	S.D.	N	Av. Wage	S.D.
650	A	-	-	-	7	-	-	3	5.00	0.00
	B	-	-	-	-	-	-	3	5.00	0.00
	C	-	-	-	-	-	-	-	-	-
651	A	10	10.86	0.00	1	6.18	.	11	3.84	0.82
	B	-	-	-	-	-	-	6	3.35	0.00
	C	10	10.86	0.00	1	6.18	.	5	4.44	0.94
652	A	12	7.54	1.21	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	12	7.54	1.21	-	-	-	-	-	-
653	A	-	-	-	-	-	-	3	5.00	0.00
	B	-	-	-	-	-	-	3	5.00	0.00
	C	-	-	-	-	-	-	-	-	-
656	A	6	7.90	0.00	2	5.70	3.11	20	3.80	0.34
	B	-	-	-	-	-	-	-	-	-
	C	6	7.90	0.00	2	5.70	3.11	20	3.80	0.34
665	A	9	10.96	0.00	1	10.96	.	8	3.35	0.00
	B	-	-	-	-	-	-	8	3.35	0.00
	C	9	10.96	0.00	1	10.96	.	-	-	-
680	A	205	10.27	1.43	76	8.24	2.21	69	5.03	1.49
	B	31	8.93	2.11	32	7.23	1.22	39	5.59	1.72
	C	174	10.51	1.13	44	8.97	2.47	30	4.31	0.59
690	A	29	8.03	1.60	38	7.16	3.20	122	4.67	0.78
	B	28	8.05	1.63	24	8.50	3.31	14	5.80	0.57
	C	1	7.50	.	14	4.86	0.90	108	4.52	0.68
692	A	15	6.85	1.46	46	4.47	0.00	46	4.11	0.75
	B	15	6.85	1.46	46	4.47	0.00	46	4.11	0.75
	C	-	-	-	-	-	-	-	-	-
705	A	4	6.00	0.00	-	-	-	-	-	-
	B	4	6.00	0.00	-	-	-	-	-	-
	C	-	-	-	-	-	-	-	-	-
706	A	1	5.50	.	4	4.75	0.50	13	3.83	0.46
	B	-	-	-	4	4.75	0.50	8	3.95	0.53
	C	1	5.50	.	-	-	-	5	3.64	0.28
710	A	1	7.75	.	1	5.25	.	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	1	7.75	.	1	5.25	.	-	-	-
715	A	25	11.32	2.75	8	8.36	2.88	-	-	-
	B	25	11.32	2.75	7	8.68	2.96	-	-	-
	C	-	-	-	1	6.15	.	-	-	-
753	A	15	9.16	2.21	14	9.44	2.83	6	4.09	1.21
	B	11	10.28	1.30	14	9.44	2.83	3	3.35	0.00
	C	4	6.07	0.50	-	-	-	3	4.84	1.42

APPENDIX 4 Table 2 continued

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Wage	S.D.	N	Av. Wage	S.D.	N	Av. Wage	S.D.
762	A	8	6.17	1.25	8	5.43	1.42	34	4.92	0.73
	B	3	5.33	1.44	3	4.50	0.00	7	4.01	0.61
	C	5	6.67	0.93	5	5.99	1.58	27	5.15	0.56
770	A	8	9.02	2.39	14	8.44	2.29	37	5.39	1.09
	B	5	10.75	0.27	7	10.63	0.00	4	3.57	0.31
	C	3	6.15	0.30	7	6.25	0.49	33	5.61	0.92
780	A	83	9.29	1.83	58	9.13	2.56	52	4.37	1.00
	B	51	10.33	1.53	50	9.59	2.42	26	4.16	0.82
	C	32	7.64	0.75	8	6.20	1.02	26	4.59	1.13
903	A	5	6.05	1.01	2	4.25	0.00	10	4.16	0.57
	B	4	6.05	1.01	2	4.25	0.00	-	-	-
	C	-	-	-	-	-	-	10	4.16	0.57
962	A	2	5.50	0.00	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	2	5.50	0.00	-	-	-	-	-	-

APPENDIX 4

Table 3

Average Years on the Job by Occupation for 21 Firms (A), for Wheels, Headers and Batteries (B), and Non-Wheels, Headers and Batteries Firms (C)

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Years	S.D.	N	Av. Years	S.D.	N	Av. Years	S.D.
374	A	7	8.21	3.91	1	5.00	.	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	7	8.21	3.91	1	5.00	.	-	-	-
413	A	3	5.67	0.58	3	3.00	0.00	35	3.03	0.75
	B	-	-	-	-	-	-	-	-	-
	C	3	5.67	0.58	3	3.00	.	35	3.03	0.75
415	A	2	10.00	1.41	1	9.00	.	5	6.50	0.00
	B	-	-	-	-	-	-	-	-	-
	C	2	10.00	1.41	1	9.00	.	5	6.50	0.00
424	A	1	1.00	.	1	8.00	.	1	2.50	.
	B	-	-	-	-	-	-	-	-	-
	C	1	1.00	.	-	8.00	.	1	2.50	.
430	A	8	3.44	1.66	6	9.33	0.82	-	-	-
	B	5	3.40	2.19	-	-	-	-	-	-
	C	3	3.50	0.00	6	9.33	0.82	-	-	-
440	A	2	8.00	2.83	4	6.00	0.00	13	6.00	0.00
	B	-	-	-	-	-	-	-	-	-
	C	2	8.00	2.83	4	6.00	0.00	13	6.00	0.00
441	A	-	-	-	1	2.00	.	2	1.75	0.35
	B	-	-	-	1	2.00	.	2	1.75	0.35
	C	-	-	-	-	-	-	-	-	-
443	A	2	10.00	0.00	15	6.27	2.12	13	4.38	0.77
	B	-	-	-	-	-	-	-	-	-
	C	2	10.00	0.00	15	6.27	2.12	13	4.38	0.77
446	A	5	12.00	4.85	14	4.64	0.63	27	3.61	2.27
	B	5	12.00	4.85	14	4.64	0.63	27	3.61	2.27
	C	-	-	-	-	-	-	-	-	-
461	A	23	9.44	6.32	6	4.43	3.96	9	5.50	7.29
	B	-	-	-	-	-	-	-	-	-
	C	23	9.44	6.32	6	4.43	3.96	9	5.50	7.29

APPENDIX 4 Table 3 continued

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Years	S.D.	N	Av. Years	S.D.	N	Av. Years	S.D.
481	A	2	1.50	0.71	-	-	-	-	-	-
	B	2	1.50	0.71	-	-	-	-	-	-
	C	-	-	-	-	-	-	-	-	-
492	A	84	14.47	8.93	44	14.09	8.31	57	4.40	2.70
	B	37	9.39	4.65	8	6.31	1.89	14	5.50	1.87
	C	47	18.47	9.47	36	15.82	8.20	43	4.05	2.85
502	A	7	6.36	3.76	8	6.56	2.23	8	5.56	0.90
	B	3	3.33	2.52	-	-	-	-	-	-
	C	4	8.62	2.84	8	6.56	2.23	8	5.56	0.90
503	A	11	10.68	9.41	20	8.27	5.30	4	1.23	1.86
	B	9	9.17	9.08	19	8.68	5.11	4	1.23	1.86
	C	2	17.50	10.61	1	0.50	.	-	-	-
522	A	-	-	-	7	7.00	2.77	8	3.37	0.52
	B	-	-	-	-	-	-	-	-	-
	C	-	-	-	7	7.00	2.77	8	3.37	0.52
534	A	-	-	-	3	6.67	1.15	7	6.00	0.00
	B	-	-	-	-	-	-	-	-	-
	C	-	-	-	3	6.67	1.15	7	6.00	0.00
602	A	105	9.79	6.22	72	4.19	4.58	153	3.01	1.96
	B	26	4.73	3.50	12	8.51	7.37	33	3.00	2.63
	C	79	11.45	6.03	60	3.33	3.25	120	3.01	1.74
610	A	12	5.10	3.65	32	5.34	2.80	9	7.96	7.18
	B	5	3.70	1.57	17	5.53	2.12	-	-	-
	C	7	6.09	4.47	15	5.12	3.47	9	7.96	7.18
612	A	1	11.00	.	1	11.00	.	13	1.54	1.02
	B	1	11.00	.	1	11.00	.	13	1.54	1.02
	C	-	-	-	-	-	-	-	-	-
615	A	3	5.67	4.62	4	5.50	0.58	17	4.65	1.66
	B	-	-	-	-	-	-	-	-	-
	C	3	5.67	4.62	4	5.50	0.58	17	4.65	1.66
620	A	3	4.67	1.53	3	4.33	0.58	4	4.75	1.26
	B	-	-	-	-	-	-	-	-	-
	C	3	4.67	1.53	3	4.33	0.58	4	4.75	1.26
621	A	-	-	-	2	3.75	3.18	29	1.84	1.51
	B	-	-	-	1	6.00	.	15	0.55	0.69
	C	-	-	-	1	1.50	.	14	3.21	0.70
622	A	22	4.02	0.98	4	2.58	0.00	66	2.99	1.41
	B	22	4.02	0.98	4	2.58	0.00	64	2.76	0.56
	C	-	-	-	-	-	-	2	10.25	0.35

APPENDIX 4 Table 3 continued

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Years	S.D.	N	Av. Years	S.D.	N	Av. Years	S.D.
643	A	2	3.00	1.41	18	4.17	4.93	57	2.85	2.75
	B	-	-	-	9	1.17	0.00	21	1.17	0.00
	C	2	3.00	1.41	9	7.17	5.61	36	3.82	3.07
644	A	15	7.40	6.20	14	4.52	3.39	35	2.62	2.07
	B	7	1.00	0.00	7	4.14	1.86	12	2.03	1.76
	C	8	13.00	0.00	7	4.89	4.59	23	2.92	2.19
650	A	-	-	-	-	-	-	3	3.00	0.00
	B	-	-	-	-	-	-	3	3.00	0.00
	C	-	-	-	-	-	-	-	-	-
651	A	10	11.00	0.00	1	16.00	.	11	2.95	2.46
	B	-	-	-	-	-	-	6	2.92	3.06
	C	10	11.00	0.00	1	16.00	.	5	2.98	1.85
652	A	12	4.00	0.90	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	12	4.00	0.90	-	-	-	-	-	-
653	A	-	-	-	-	-	-	3	3.00	0.00
	B	-	-	-	-	-	-	3	3.00	0.00
	C	-	-	-	-	-	-	-	-	-
656	A	6	7.00	0.00	2	6.75	7.42	20	2.76	2.02
	B	-	-	-	-	-	-	-	-	-
	C	6	7.00	0.00	2	6.75	7.42	20	2.76	2.02
665	A	9	20.00	0.00	1	20.00	.	8	0.08	0.00
	B	-	-	-	-	-	-	8	0.08	0.00
	C	9	20.00	0.00	1	20.00		.	-	-
680	A	205	14.53	4.41	76	9.13	6.30	69	3.07	2.04
	B	31	6.13	2.77	32	4.60	2.55	39	3.02	2.37
	C	174	16.03	2.58	44	12.43	6.17	30	3.13	1.54
690	A	29	7.88	7.84	38	4.99	5.56	122	2.72	3.11
	B	28	8.11	7.88	24	4.72	4.96	14	1.75	0.91
	C	1	1.50	.	14	5.46	6.63	108	2.85	3.27
692	A	15	3.61	2.45	46	2.85	2.27	46	2.27	1.84
	B	15	3.61	2.45	46	2.85	2.27	46	2.27	1.84
	C	-	-	-	-	-	-	-	-	-
705	A	4	1.17	0.00	-	-	-	-	-	-
	B	4	1.17	0.00	-	-	-	-	-	-
	C	-	-	-	-	-	-	-	-	-
706	A	1	4.00	.	4	3.25	0.96	13	3.06	3.07
	B	-	-	-	4	3.25	0.96	8	3.52	3.86
	C	1	4.00	.	-	-	-	5	2.33	1.03

APPENDIX 4 Table 3 continued

Occupation	Code	CITIZENSHIP								
		Citizen			Greencard			Undocumented		
		N	Av. Years	S.D.	N	Av. Years	S.D.	N	Av. Years	S.D.
710	A	1	12.00	.	1	1.00	.	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	1	12.00	.	1	1.00	.	-	-	-
715	A	25	8.02	4.87	8	7.06	2.40	-	-	-
	B	25	8.02	4.87	7	7.57	2.07	-	-	-
	C	-	-	-	1	3.50	.	-	-	-
752	A	1	10.00	.	-	-	-	-	-	-
	B	1	10.00	.	-	-	-	-	-	-
	C	-	-	-	-	-	-	-	-	-
753	A	14	4.82	6.09	14	7.14	6.18	6	3.87	3.82
	B	10	5.70	7.00	14	7.14	6.18	3	2.67	1.53
	C	4	2.62	2.21	-	-	-	3	5.08	5.46
762	A	8	5.69	4.96	8	1.34	1.59	34	3.75	3.66
	B	3	1.83	2.74	3	0.25	0.00	7	0.36	0.13
	C	5	8.00	4.64	5	2.00	1.73	27	4.63	3.61
770	A	8	5.00	4.07	14	5.57	4.59	37	3.28	2.05
	B	5	3.40	3.13	7	2.00	0.00	4	3.37	1.89
	C	3	7.67	4.62	7	9.14	3.98	33	3.27	2.09
780	A	83	10.85	9.25	58	6.06	3.51	52	2.85	2.70
	B	51	12.85	10.01	50	5.51	2.80	26	2.34	2.74
	C	32	7.66	6.91	8	9.50	5.48	26	3.36	2.62
903	A	5	3.80	0.45	2	4.50	0.71	10	1.90	1.43
	B	5	3.80	0.45	2	4.50	0.71	-	-	-
	C	-	-	-	-	-	-	10	1.90	1.43
962	A	2	3.00	0.00	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	2	3.00	0.00	-	-	-	-	-	-